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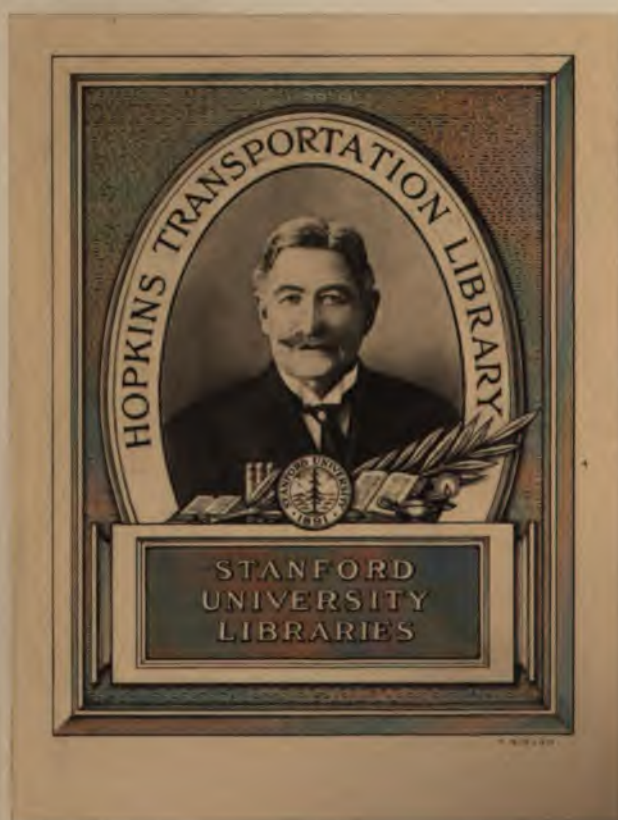
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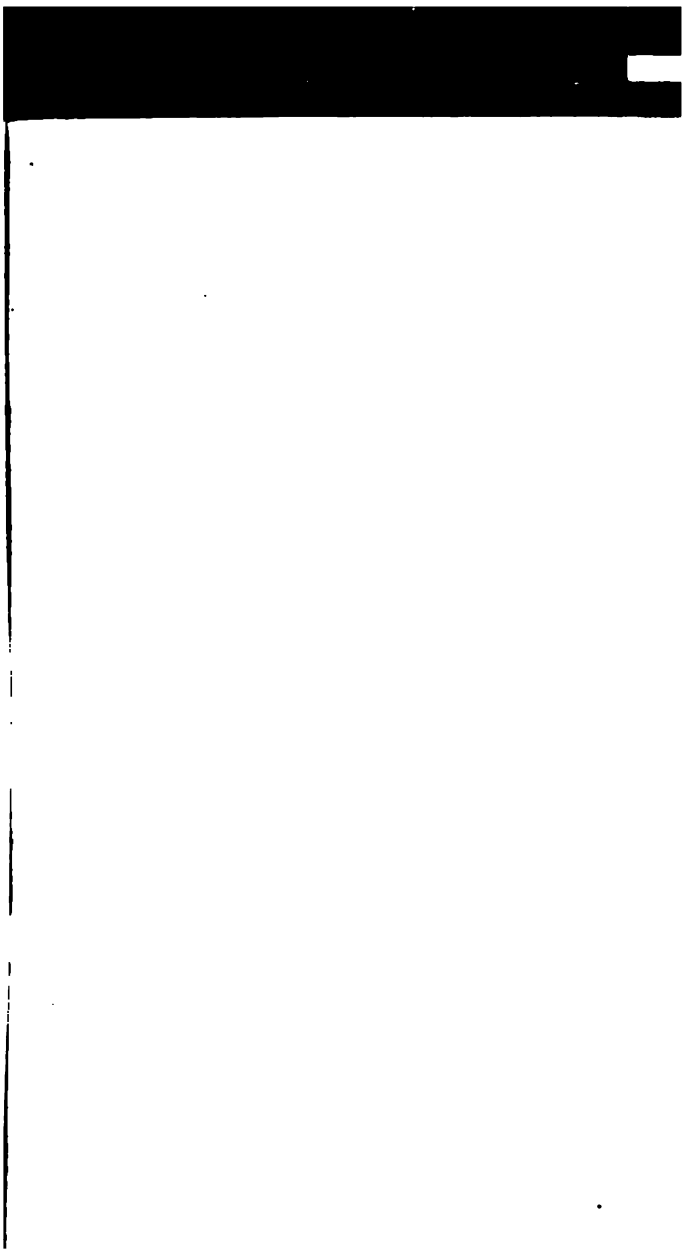

THE

NAUTICAL MAGAZINE

AND

Naval Chronicle,

FOR 1843.

A JOURNAL OF PAPERS

ON SUBJECTS CONNECTED WITH

MARITIME AFFAIRS.

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THE

NAUTICAL MAGAZINE

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Naval Chronicle,

FOR 1845.

Notes During a Voyage to Hong Kong, *on Pulo Condore, the Sooloo Sea, Masbate, Timor, &c.*

Ship Emperor off Ascension, Oct. 11th, 1844, laid down in Horsburgh's charts 15 miles S.W. of its true position as given in his and Norie's Directory, and proved by good sights by three good chronometers this morning at 8 A.M.

Dear Sir.—Excuse the freedom of the term, but in fact, through the medium of your most useful work, you have become one of my most valuable friends, and I can find no title your publication so justly merits, (in matters relating to nautical affairs,) than that of "Horsburgh Junior." Judging from your extreme good nature in making space for communications nautical, some of which, like this of mine, would, I take it, bear revision,* I shall without further preface, commence with the fact that I left Liverpool in this ship for China, July 5th, 1843: reached Anjer in 100 days, and on the 9th November, 1843, when within one day's sail of Pulo Sapata, was dismasted, (truth being a libel) I dare not say how. With the N.E. monsoon setting in dead against me, I had nothing for it but to up stick, Sincapore being the only well-known eligible port under my lee, to refit and water. However, the island of Pulo Condore being directly in my route, and only a day and a half's sail from me, I determined to anchor there if possible, and did so, first in the bay at the S.S.E. side of the Pulo Condore *Group*, as they *should* be called: the only proper entrance for large ships into which bay is between the Button and the two small islands on the south-west side of the bay, keeping two-thirds over to the Button, where you will carry in 8 and 7 fathoms to the only proper anchorage; viz. Button bearing E.S.E., dist. three-quarters of a mile; south extreme of bay S.W.b.W.

The north entrance into this bay may be clean, and have plenty of depth, but I doubt it, for the following reasons:—On various occasions

* We think it right to state that we have in no way curtailed or altered our correspondent's useful, and, to ourselves, gratifying communication. And we tender him our thanks for it as well as for recollecting our bottles of latitude and longitude, which shall be duly announced on their safe arrival.—Ed. N.M.

I saw the sea break well right right across it, when the north-east monsoon blew fresh as if over a barrier reef; and if a ship disabled or otherwise was sitting at the north entrance before a fresh of wind, and [illegible] the passage for [illegible] she not clear out again on either tack from the front of the mountainous land; and moreover when in, [illegible] it is nearly impossible to clear the coral shoals occupying nearly the whole inverted space of the north end, many of them void of water at [illegible] a pilot-boat, as a pilly-boat I have proved it. Now, as regards the entrance into the bay, between the two small islands and the north-west extreme there is plenty of water, more than you could bring up in a clear passage, but far too narrow for a large ship to attempt with any propriety. There is a village on the east side of this bay (see Horsburgh's E. I. Directory, page 324, off which, for nearly a mile and extending well right from the north to the south-west end of the bay is a most dangerous and shoal coral reef, shelving outwards at nearly right angles from 3 feet to 30 fathoms, in a boat's length.

This reef and bearing all facility of watering, which when got is by no means good: the natives are, however civil, although a little peculiar; but, being half-cast Malay and Chinaman, this last property is in them termed "*water*." Now, for the harbour, which I can freely recommend any one to enter without fear, and by doing so avoid the aforesaid bay, which at the best is but a wild roadstead, with bad holding ground.

The *good properties* of this harbour are as follow:—Beautifully clear *and sweet water, ad libitum*, and easy of access: good holding ground *of soft blue mud*, 9 fathoms water, and a tolerably clear entrance, and *perfectly smooth*; and completely sheltered from the north-east and south-west monsoon when in. The entrance to this harbour is on the *north side, westerly, of* the Pulo Condore Group, having on the starboard hand of entrance nothing but Little Condore, the westernmost isle, and on the larboard hand a group of small islands to the north of *Great Pulo Condore*, and reaching nearly to the barren white rock off its north-east end.

Horsburgh speaks of a passage between the outermost of these islands and the inner one. As taking it would avail nothing in time, when making for the harbour, and as I have reason to suppose it not over clean, it would be better avoided. Nor should any of these islands off the larboard side of entrance be made too free with, as they are all skirted by coral reefs. But in entering you may approach your starboard side within two cables' length without fear, and then shoot ahead all you can, if the wind is scant, and down anchor: do not try to beat up, but furl sails and warp up, abreast the only bay on the west side; when more than rather above its centre in mid-channel, anchor for a full due, and you will be half a mile from your watering place on the east side, discoverable only by a small patch of sandy beach.

The upper part of this harbour is composed of a long level sandy flat terminating in the harbour's south entrance, 40 yards wide only, and not passable at low water even with boats. This sand is so level, and with such an easy inclination outwards, free from coral, towards the north end of the harbour, that any ship having been foul of a shoal in the China Sea, might be warped on this sand at high water, and careen

here with safety. Do not moor here unless you have a swivel, for you could not keep an open hawse an hour, little catspaws coming off the hills on all sides but never very strong.

After being detained here sixteen days refitting, &c., &c., I tried to beat up, both the Middle and Palawan Passage for Hong-Kong, but failed, from having a constant run of foul wind and current against me. So I ran through the Balabac Passage, very fairly laid down in the charts, (although on far too small a scale) into the Sooloo Sea, and stood over for Mindanao, fetching the Cagayan Sooloo Group, placed out of all true position, skirting Mindanao, Negros, and Panay, at which last island I anchored in Antique bay; Point Nasog bearing S.b.W., and the fort N.N.W., distant one mile, but the fort one mile and a half or two miles off on the same bearings would be better, as foul ground projects considerably out from the governor's house just within the fort. Eight fathoms water and good clean holding ground was found here. But this bay, and all others along the west side of these islands, are only fit to enter in the north-east monsoon, when the weather and scenery of these fine islands produce the beau ideal of all that is beautiful to the mind, or pleasing to the eye.

I must now, Sir, beg to refer you to your valuable work for 1843, page 35, in which is a letter signed James Laird, speaking of the shoals near the Buffaloes and Semerara isles; which letter at the time of attempting to pass these islands, I knew not the existence of, to my very great regret, for all it contains relating to them is *bona fide* true. However, wishing to get into the China sea again, through the strait between Mindoro and Calamianes, when abreast the dry sand bank off Panay, I stood across for the Buffaloes, but approaching them on the south-westerly side, I found shoals (neither spoken of nor laid down by Horsburgh,) staring me in the face on all sides, with discoloured water under foot; and much doubting that what I did see might only be a beacon for more hidden dangers, I hauled up for Panay again, and as I found myself in a minority of one, at carrying discretion to excess, I lay to under Panay that night, and tried it again next day, with no better success; and I hold the south-west side of these islands to contain a mass of coral reefs stretching nearly to the Quiniluban islands.

Now, with respect to Point Potol, the islands off it, their bearings from it, and the trend of the land near it, all which are laid down *wrong* in Horsburgh's chart, as follows:—The chart places an island near it, bearing from it south-west, there is none in that position, the one I presume meant being due west from it. The chart makes Point Potol the westernmost part of the northern extreme of Panay, whereas the land trends north-eastward six miles from the western point to Point Potol; off the western point, distant six miles south-west of it *is* a low sandy island, not placed in the chart; and, in fact the whole bearings of this entrance to the Mindoro Sea are very imperfect and badly defined, the scale of the chart being far too small to admit of the various islands, shoals, &c. claiming their proper individual size, or the real space existing between each. Once more I must beg to refer you to your most useful work, page 211, signed "John Hall, jun."

This gentleman says, at least as well as I can make it out, that, finding he could not beat down the Mindoro Sea against the whole

strength of the south-west monsoon, after beating off the coast of Panay a day or two,—consequently having beat through the Mindoro, and being then in the Sooloo Sea, he found he was losing ground, &c., &c., and therefore bore up, to try, if possible, to get into the Pacific without going round by Celerite Point, which is at the entrance of the Straits of St. Bernardino. Now to me, after half an hour's patient overhaul of Horsburgh's, and the latest Spanish Admiralty charts, Celerite Point *non est inventus*. Again I must take the liberty of quoting Mr. Hall's letter, in which he adds,—"the first place I ran for was the space between the islands of Semerara and Cape Potol, in the island of Panay." Consequently he was running back to the Mindoro Sea, although he has confessed his inability to beat down it; but, (he says,) I found it full of shoals, small islands, &c. &c., without an opening. Again, "being disappointed there, I stood to the northward, and found an excellent passage free from all danger between the islands of Semerara and south end of Mindoro." Now Mr. Hall being off the coast of Panay, near the space he speaks of between the islands of Semerara and Cape Potol, and standing on northward, he must, indisputably, have gone through the very passage aforesaid without an opening; for a man at Point Potol steering north to fetch the south end of Mindoro, bearing W.N.W. from it, for the purpose of getting to the Straits of St. Bernardino, bearing E.N E, of Point Potol, is, —— no matter, all I wish to observe on this subject further is this;—the passage from the Sooloo into the Mindoro Sea, between Point Potol and the Semeraras, is the only clear one in existence, if standing along the coast of Panay; that between Semerara and Mindoro, or between Palawan and the Quinilubans, being horrid bad; vide, page 35, Capt. James Laird.

Should Mr. Hall see these remarks, *id est*, if you think it worth while to shew this up to the nautical world, I trust he will not be offended; but having on the 5th of January of this said year, tried to make a passage, and failed where he found all clear, and having made a passage, where, with him, none existed, both steering northerly, I feel it right to state things as they were on the 5th January, 1844.

N.B.—In the Spanish Admiralty chart I bought of the captain of the port at Manila, in May, newest edition, there is a shoal placed midway between Tablas, derisively so called, and the south-east end of Mindoro, not having an existence assigned to it in Horsburgh. It may not be there, but by keeping either island tolerably aboard, it would be easy to avoid any risk from it.

Passing between Point Potol and the Buffaloes, I proceeded through the Mindoro Sea, skirting Tablas on my starboard, and Maestre de Campo on my larboard hand, passing between Isle Verde and Luconia into Batangus bay, for the purpose of procuring fresh prog for my passengers. After some trouble we got soundings in 23 fathoms at the upper end of the bay, starboard side, with the flying jib-boom end plumbing the fishing stakes, this being the only anchorage in the bay, and safe only in the north-east monsoon.

As all supplies are procurable in the Philippines only through the Alcalde, or governor of the province you may be in, I waited on this gentleman, and begged the exercise of his best endeavours in this matter in my behalf. He forthwith sent runners in all directions, to pro-

cure eight dozen fowls, two cows, food for fowls, &c., &c. to which were were added a goat, and three deer, a bag of flour, and one of bread, *cum multis aliis*, which were not ordered. As sea-captains are generally considered fair plunder, both in foreign and home ports, when I saw this gentleman fighting away for dear life to get these things ready, and making sundry additions to my order, I was dirty enough to feel sure I should be considerably used up in the settling therefore; and there was a certain tremor about my finger ends, when they sought the depths of my pocket for the small sum therein, fearing it would prove all too little for the demand on it. But I cannot convey to you how ashamed I felt, when this most kind and noble-minded gentleman quietly said, in reply to my attempt at producing the *quid pro quo*, "I beg you will not pain me by offering any other remuneration than your friendship; you are a gentleman, a stranger, and in want of certain supplies, I am here, living in affluence, and *in officio*. It is my duty, as well as great happiness to be of use to you, feeling assured, that if you met me in England similarly situated, you would be equally willing to oblige me." There is a lesson for all British tars of every degree, which they would do well to ruminate on, and profit by, instead of calling every man they meet abroad an outlandish "——" at his own door; they being the very nice person they are speaking of at the time. From here we made an average to Hong-kong, which island, I heard previous to leaving home, was very like the Isle of Wight; if so, it is in the same proportion that the most ragged of beggars might claim as an affinity to a peer in his robes of state: it is sterility stark naked, and why that side of the bay should have been chosen in lieu of the opposite, which was equally at our disposal, I cannot understand. The last in the hot months being never without a cool breeze of wind, which, coming from over the hills above Hong-kong, leaves it unbreathed on; from which also every necessary of life has to be boated across the bay to Hong-kong, and last, but not least, when a typhoon sets in, every ship has to get across to and from the Hong-kong side as fast as may be, it being then the only safe anchorage.

It is said water was the great desideratum; judging from circumstances, one would be led to suppose, beer. And now, Sir, I am about to treat on a subject calling for prompt redress from the home Government and Admiralty. Do not be alarmed or indignant, for having been one of those most uninteresting individuals, a reefer, without friends in office. I am a great stickler for the honour of the service, and therefore do I speak. Firstly, as respects Captain Fitzroy's bill for the abolition of all merchant captains, who have not, as mates, found time to swallow and duly digest Mr. H. Moore, Mrs. Taylor, Messrs. Thompson, Norie, &c. *seriatim et grandatim*, something may, and indeed *must* be done in this matter; but if gone into, hand over head, because philanthropy chooses to run a-muck, as on the West India Slave Emancipation Act, it will produce similar effects, and fully aid steamers in rearing a race of men, now fast gaining a majority, who know more law than gospel, and less seamanship than either. In this reference to steamers, (as I have been master of the late unfortunate President and British Queen,) I shall readily be acquitted of all allusion to commanders or officers, for in no instance are a man's physical powers and mental energies so

taxed, as in the full exercise of his duties as a steam captain. But the men, if they can steer well, and keep a look-out without winking, are called on for very little further display of the various duties of their calling. Now I know what you are going to say, viz., "but my dear Captain Keane, look at the numberless wrecks, and fearful loss of life every winter in the British Channel, look at the *immortal* deaths of the Conqueror and Reliance"; (excuse the bull, I *am* Irish, and only made it for the present purpose of exposing the bad taste of wrecking ships over again for everlasting, and showing up the supposed errors of their deceased captains, with, of course, the very best intentions.) *De mortuis nil nisi bonum* is a generous old saying, holding good here, I take it, as elsewhere. It is, however, but too true, speaking generally, that in seven merchant ships out of ten, neither the use of deep sea or hand lead is thought of, until it is let down over the bows, to ascertain how much less water there is alongside, than the ship draws; and I am fully of opinion that this unpardonable negligence of a most imperative duty, is too often the cause of serious loss of life and property. This digression however brings me into a straight course again. Firstly, as the clergy say, there is no pressing into the service; secondly, a merchant ship when ready for sea, must prove at the custom house of her port, that she has duly shipped so many officers, able seaman, and apprentices, before she can get her clearance; thirdly, as times are really so very bad with regard to the shipping interest, it may fairly be presumed that owners will not overdo the thing as to number of crew, and small blame to them,—for anyhow, at present prices, unless their ships are both fully insured and totally lost, the balance of account is against them; fourthly, taking my own ship par example, I left Liverpool with a crew (all told) numbering thirty-six souls, divided as follows:—One captain, chief, second, and third mates, boatswain, purser, sail-maker, carpenter, joiner, steward, cuddy-servant, cook, butcher, sixteen seamen, (good, bad, and indifferent), six apprentices, four of whom had never been to sea before. This was considered a very fair allowance of crew for a ship close on 700 tons; but as will readily be allowed, not one too many of the right sort in bad weather to handle her properly.

In this crew there was of course one or two rotten sheep; consequently in getting to Hong-Kong, and Jack as inevitably getting drunk, seven of them volunteered for Her Majesty's service; but how?—by waiting for the officers to go below, and then running up to the fore-top-gallant-mast head, with a dirty pair of trousers, or a still dirtier shirt, on view of which, every officer of every man-of-war, is not only allowed, but expected to rush into the jolly-boat and shove off, I verily believe without orders being asked or received, and pull away might and main for this soiled emblem of Jack's patriotism. The man or men are taken away without question or reply to any remonstrance on your part, you being ordered to pay them their wages, whatever their previous conduct may have been.

I have here to observe, that one of my men having been seduced to join the Minden, when drunk, on my making a proper application to Admiral Sir Thomas Cochrane, he restored him to me in the most kind and handsome manner. This however is but the exception to the rule, which is alike derogatory to H.M. service, and perfectly injurious to

the Commercial Shipping interest. Now, it may fairly be asked, is this either consonant with the respectability of H.M. service? or, has it one iota of anything but the extreme stretch of power to support it; and is it to be wondered at, or are merchant captains to be grossly stigmatized, right or wrong, as the sole cause of ships being daily wrecked in the channel?

Taking 7 from 35 leaves 28 souls, of all sorts to arrive at the Landsend in the dead of winter, in a ship of nearly 700 tons, (which on leaving home, 35 souls were considered barely adequate to navigate;) perishing with cold and suffering more or less from sickness incident on long exposure to a tropical sun. And what is the inevitable result? Shipwreck, loss of life, stigma to the poor devil of a master, alive or dead, and serious expense to Lloyd's, that most superior body of gentlemen, who are above compare, the most gulled set of men on earth, and *who will be so*, until they can make a merchant captain understand, that when they have fully, and *more* than fully, insured both his ship and cargo; his duty, or rather, the full and proper discharge of it, is as completely *their* just right, as his owners.

I full well recollect the gentleman at the head of Lloyds' at Liverpool, coming on board this ship, and requesting my serious attention to the fact, that the ship was insured on more moderate terms than usual; partly, as I was led to suppose from what he was kind enough to say, in consequence of my being in command of her. And being at the moment busy, hand and head, with all the various details of a new ship, I have some doubts as to whether I paid him due respect. But this I *can* answer for, that up to this day, throughout this most tedious and unsatisfactory voyage I have done my duty to the insurers; for this ship has been near enough to any quantity of shoals in the China, Sooloo, Mindoro, Pacific, and Banda Seas, and their various straits, to make her the very *corollary* of intricate navigation. As a proof of which I shall just add, that from the time we left Anjer for Hong-Kong, until we arrived on our return to Coupang bay in Timor, a space of nearly ten months, we never were able to set a studding-sail but for six hours, and made more than 300 tacks.

With your leave we will now get to the island of Masbate, proceeding for the Straits of St. Bernardino from Manila. Being close to the mouth of Barreras bay in that island, and the wind failing us, and current setting us back, and moreover, I being so ill at the time as to be hardly able to keep on end, I referred myself to Horsburgh and my new Spanish Chart, to ascertain the propriety of anchoring there for the day, to recruit my health with a little rest and sleep, two things I was by no means intimate with. Finding this bay, on an inspection of these two charts, perfectly clear of all shoals, with six fathoms least water, easy of access, ingress and egress, I stood in without fear, having a hand in the chains, and a young gentleman aloft forward, on the look out. When off the village at the entrance of bay, two natives came on board in a canoe, who said that in the upper end of the bay was best anchorage; to that we stood under topsails, jib, and spanker, and got well up before getting soundings, with twenty fathoms of line, then four fathoms, down helm; and on rounding to, we ran on the only soft and rotten sandy coral spit in this most treacherous place. For had we round-

ed-to to port instead of starboard, we should have knocked our bows in Here we lay 24 hours, the tide only flowing once in that period, my chief officer diving and swimming round her bottom, and finding the ground all soft. But the next day, on sounding round the bay, where 36 fathoms were laid down on the chart, we found 16 feet, and where 6 fathoms were placed, the jolly-boat would not float. In point of fact, this bay, in lieu of being clean, is a perfect mass of most dangerous coral reefs, of the worst description; so bad, indeed, that I had to lie here six days, waiting for the south-west wind to run out again, having no room to work out, and at last, with great difficulty, we kedged out to the entrance and made sail. No man ought to enter this bay, and as it stands invitingly open, in making for the St. Bernardino passage, I have given this detail to warn the unwary.

From leaving Manila, May 24th, to our arrival in Coupang Bay, July 21st, via St. Bernardino, Pacific, Gillolo, Straits of Manippa, and the Bombay passage, we had not 12 hours south-westerly wind, although in Manila bay the south-west monsoon had set in three weeks before we started, and the usually prevalent winds in the Pacific at this time of year are south-west.

As respects the defined outline of Timor island, it is very difficult to distinguish one part from the other as laid down on the chart for your guidance; for instance, Ragged point at the turn of the land to the southward. This point is not distinguishable from the other promontories, around it if ten miles off shore, or even six, from its diminutive size, and consequently of no avail as a guide. But to the southward of it, is the north point of the bay, to the northward of the only level line of coast all along shore before getting to Coupang bay, and which cannot be mistaken, for it shelves down on all sides from its apex, spreading out towards the bottom in the shape of a broad-based cone; and its appearance being that of loose reddish sand, and no similar spot having existence along shore, it is both easily recognized, and cannot be mistaken. The best anchorage in Coupang bay is, with the fort S.S.W. one mile, and the best water, not at the town, but a little above a missionary's whitewashed house, standing alone, alongshore on your larboard hand. Send your boats the first thing in the morning, before the land breeze comes down strong, and you have a fair wind back. There is no occasion to moor, as advised by Horsburgh. Get into 20 fathoms, down anchor, and very likely, without help, you will not get it out of the most tenacious blue clay I ever met with. We broke half the cogs of our patent windlass getting ours, which was by no means easy of accomplishment. There was a French gentleman living here, a Mr. Viscompte, one of the kindest, and really hospitable men I ever met. From him, and the military commandant, I received the greatest kindness.

Stock is dear here, and scarce; water, in fact, is all that is procurable in any quantity. As I see from a perusal of your book, that you express and feel a strong thirsting after stray bottles, I have placed to your account, with the firm of Messrs. Neptune and Co., sundry bottles, full of latitude and longitude, which I hope you will duly receive, and be fully credited for. Also I find an outline of Capt. Fitzroy's bill for the better organization of the merchant service. Within the last two years, I have put together, in, I fear, a rather crude manner, sundry

notes on the same subject. Should you feel any wish to see the matter therein contained, or to publish any part of it you may deem worth the compliment, you are heartily welcome to it, whenever you express a wish to have it in your possession.

I am, &c.,

M. M. KEANE.

[We have already written to our Correspondent on the subject, and have no doubt that the remarks to which he alludes will prove as important in their way as those which he has sent us are to the Navigator.—ED.]

THE POSITION OF GREAT BRITAIN AS A MARITIME COUNTRY, *and the Advantages to the Mercantile Marine considered.*

IF any of our competitors in the race of commercial enterprise contemplate the outpourings of unavailing regrets in the evidence given by shipowners, and shipbuilders, before Select Committees of the House of Commons of England, they will very naturally infer, that the spirit which once animated a nation of seamen, and hardy adventurers, has departed from its favoured abode, and that despair and ruin have usurped its place. But these are the moanings of a class, who in their overstrained longings after sudden and inordinate wealth, have defeated their own ends. They have absorbed the just privileges of the master mariner, who has become a mere labourer in a vineyard, where he is never allowed to solace himself with a taste of its fruit. They have reduced the seaman to a state of degradation, only a shade above pauperism. He is never affiliated to their service. He is only shipped on the day of sailing, and discharged on the moment of his return. He is housed during the voyage, where in most instances, he can neither keep himself dry, nor clean. He loses all self-respect, and consequently all respect for his employers, and despises his officers as men, placed over him for a short season, to wring all they can from his endurance; and then to turn him again adrift upon the world. There are some truly honourable exceptions; but generally this is the position occupied by seafaring men of the present day; and the reason assigned by shipowners, and ship-builders is correct in detail, but false in principle. It is caused, they say by over-building,—by an excess of shipping.

Then let us ask, where is the fault? I believe it is easily answered! With themselves. Have they not, do they not, even in a season of maritime depression hunt everywhere, and beat up for recruits, to join them in shares to build ships and vessels; under the impression that new brooms sweep clean, while the old crazy craft will be thrown aside like broken handles. Is not the blacksmith, block-maker, rope-maker, sail-maker, painter, plumber, ship-chandler, baker, butcher, and a host of others, impressed into shareholders? And should the captain or any other unlucky wight, who has not had a finger in the pie, attend the settling day, when all these worthies present their claims upon the ship, what is his amazement? *Their profits* are secured on the extravagance of their respective demands, and the joint owner without a bill to present, is the martyr, and the scape-goat of of the concern, and this system keeps on its way, thrusting aside those whose proper business is "in the great waters," and who ought to be remunerated for a *life of toil, personal* risk, and privation. Then

comes distrust and discontent, seizing upon the mind of the navigator. On his skill, his good conduct, his exertion and activity, the success of the voyage must depend. If it is successful, and he returns, where is his recompense? His vessel is dragged up to the docks by steam-tugs, the cargo bundled out. Off! off again she goes, refitting by the way, tugged again to sea, before he has time even for reflection.

The charms of a seafaring life once consisted in the respectability it conferred, and on the delights and consolations of a return to home for a season, however short. All this is sacrificed, and yet he hears nothing but complaint. The ship does not pay her owners for the outlay, although she makes six voyages in the year, where four in the olden time were the average. The seaman is bewildered in his attempts to divine the cause; he works harder than formerly, and fares worse. Surely this drive a-head system has something to do with it. But who is to bind the shipowners with a cord of amity? Who can induce them as a body to cease from that headstrong opposition which can only be satisfied with the ruin of its rival in commercial competition? Who can convince them that by driving their ships out upon each other pell-mell to Foreign ports, they knock down the freights, and ruin the voyage for all hands. Will they never be persuaded that the remedy is with themselves?

Every ship should have a proper time to overhaul and refit on her return home proportionate to the length of her voyage. But she is kept at it, till her efficiency is impaired, and she is lowered in the estimation of freighters in a foreign country, and with her the general character of the mercantile marine of which she is a member.

Surely it is as clear as that two and two make four, that it is our own overstrained cupidity, and not the competition of Foreigners which presses so hard upon us. It is to freight we must look. Freight is the nursing mother, but how can freight improve under the present system? If a market opens for a score ships, a hundred are on the way! No regard is paid to fitness for the undertaking; a fleet is assembled, not to compete fairly with each other for an honourable and remunerating freight, but to carry cargo for nothing rather than allow a rival in the race of ruinous speculation. Is it not clear that where it employed ten ships to complete fifty voyages in a year, and seven by means of all the hurry scurry perform the same, that three are displaced; and displaced without any benefit to the parties concerned,—for the rate of freight falls in proportion to the number of vessels thus thrown on their own resources to go seeking, and becoming carriers at any price and at any loss.

It seems clear, that no treaties with foreign powers, no navigation laws, can arrest the evils of overstrained speculation in ships any more than in factories. It must find its level. Meanwhile let us take a glance at our natural advantages as a maritime country, a subject studiously avoided in evidence before the aforesaid Committees. We hear a great deal about foreigners living upon stockfish and train oil, black bread, &c. It is true they live very hard, and much of our mahogany beef, and weevily biscuits, smuggled on board our merchantmen for a second or third voyage, is inferior even to their diet, but we will give them the benefit of their cheap provisions for a crew,

of ten men in a merchantmen, from the Baltic or North Sea, bound on a voyage across the Atlantic, and the difference of their wages to boot, and allow me to ask our disconsolate shipowners if they would like to exchange their difference of expense for the difference of position; whether they would like to wend their way through the Belts or Sounds, or navigate the Cattegat and North sea before they are on a fair start with British vessels from the Thames or Downs, to which anchorage our London vessels are towed in most cases at a trifling expense. I ask them if the wear and tear of a Russ or Norskman before he can be neck and neck with a British vessel on her outward voyage, is no item in the expense; or how he would like the Thames to be periodically closed against him with ice several months in the year, while the ports of some more favoured country were teeming with the busy oars and sails of commerce. Yet these are the advantages of our maritime position. Russians, Prussians, Danes, Swedes, and even the ships of the Hanstowns, are oftimes beating about for weeks in the North Sea, while our ships have worked through the British Channel, and they are on the broad Atlantic. How is it possible the northern nations can compete with us in the southern trades? In their usual intercourse with our northern ports they may, and they have a just right to their share in a commerce in which they are directly concerned; but it would be strange, indeed, to fancy that the transit of a cargo of cotton from America to Antwerp, (much less St. Petersburg), is as easily achieved as to Liverpool or London.

The position of Great Britain enables her merchants to seize every commercial advantage. She has the first intelligence of every change, and her ships have the start of every competitor, and she is rapidly improving even these advantages by her internal resources. Her own cargoes at Southampton are within as few hours by railroad from London markets as they were days by sea, escaping all the perils of an intricate and dangerous navigation, and consequently lessening the risk and rate of insurance. The transit of Indian produce from the Mersey to the Humber is only the work of a few hours, and thus England holds out one hand to the Atlantic, and the other to the German Ocean. These railroads are neutralizing all the inequalities of a producing and diversified country.

Provisions are as cheap in the wholesale London warehouse, as on the quays at Cork; and it is only in the article of animal food, that we are a shade behind many of our competitors. A great change is secretly and quietly working its way upon the very circumstances of our geopraphical position. Our ships are availing themselves of those ports, which present the most easy and favourable point of departure and return; and the manufacturing districts with the country generally, will draw their resources from those the nearest depôts of foreign trade. This will cheapen provisions to the shipowner in Anglo-American supplies. It was remarked to me the other day by an intelligent foreigner, as passing strange, that the English nation had monopolized nearly all the Indies, East and West. All the sugar, coffee, tea, rice, tobacco, and rum, and yet could not supply the carriers of these things, at as cheap a rate as *those countries from* whom we had taken those posses-

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[illegible] sea line with her
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[illegible] Mammon!!!
[illegible] Did it never sug-
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[illegible] possessed. Ask one of
[illegible] premium was exacted of his parents,
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[illegible] was then required! Now, mark the
[illegible] officer upon half-pay, who has served
[illegible] of boys. He wishes to send one to
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owner, captain of an East India ship. Mark the fallacy of this—the owner has ten ships, each carrying eight midshipmen, and four junior officers. Here are a hundred and twenty aspirants for commands upon the lists of a concern, which has only ten at his disposal, and without the melancholy war chance of the ball, which levels one, elevating another, or the more cheering prospect of captains retiring from the service with competencies.

This is serious in the prospective, subduing to our national pride!—either a spirited marine or abject servility is depending. It is of a piece with agricultural distress and discontent, brought on by seizing all the small farms, and placing the land at the mercy of large capitalists, till the midnight incendiary gives them alarm, and induces many of them to try the allotment system. And there is a species of incendiarism destroying the noble character, and demoralizing our mercantile marine. Wherever a ship is moored, there are harpies ready, to take a stand by the side of necessitous officers, with temptations of no ordinary nature; then the illiberal owner is punished by dishonest averages, exorbitant impositions, and deceptive practises of all kinds—but the great evil still remains, in the right arm of a nation becoming gradually paralyzed. A brave and active marine population, mentally and physically weakened, and exhibiting sure symptoms of a decline verging fast, very fast to premature and inevitable decay.

K. B. M.

LIGHTS OF THE UNITED STATES.—*The Delaware and Henlopen Lights.*

Boston, October 28, 1844.

DEAR SIR.—A large ship having recently been wrecked on our coast, near Cape May, at the entrance of Delaware Bay, by mistaking the floating light on the Five Fathom Bank for Cape Henlopen Lights, I take leave to call your attention to the fact, and to explain the apparent reason of this mistake. Cape Henlopen light is one of the first magnitude, and shows a bright *fixed* light. Three-fourths of a mile N. 5° W. of it stands a Beacon light of small power, but which is also a *fixed* light. The floating light on the Five Fathom Bank shews *two fixed lights*. She is moored in 7½ fathoms, 15½ miles from Cape May (*revolving*) light, and bearing E. 20° 30′ S. from said light. A vessel approaching Delaware Bay from the northward and eastward in hazy weather, and not having obtained a meridian altitude for two or three days, might easily make an error of 25 miles in her latitude, which would place her on the parallel of the Five Fathom Bank instead of that of Cape Henlopen, and seeing the two fixed lights of the floating light, would readily mistake them for the two fixed lights on Cape Henlopen, notwithstanding the latter are three-fourths of a mile asunder, and continuing her course on this supposition, she would very shortly bring up on the coast of New Jersey, as was the case with the *wreck above mentioned*.

The want of a correct system of distinction among the lighthouses and floating lights on our coast; the fact that our floating lights are removed from their station for repairs at two days' notice, or break adrift, and no official notice of the accident published, has long been a subject of complaint amongst us. Again, there are lighthouses marked on the charts, which have no existence, viz. Cape Florida Light, burnt by the Seminales in 1835, and not yet rebuilt. Mosquito inlet on the east coast of Florida, undermined by the sea in 1837, and not yet rebuilt. The revolving light at the south pass of the Mississippi tumbled down two years ago, and no official notice has yet been given of its ruin or re-establishment, though, I believe, a temporary light has been exhibited. There is a fixed light at the grand pass of Vermillion Bay, on the coast of Louisiana which I believe is not yet noticed in English charts.

With reference to Delaware Bay, the only chart we have of it is well known to be very erroneous; but it will not be long before we have published the chart by the Coast Survey, which may be relied upon as correct. In Blunt's Coast Pilot are the following directions for the Five Fathom Bank, viz.:—"Vessels bound into the Delaware, coming from the northward, or having fallen to the northward of Cape Henlopen, should be careful not to approach nearer than 12 fathoms water, until they have got into the *latitude* of the said Cape, to avoid the shoal called the Five Fathom Bank, on which a light vessel having *two* masts, with a lantern on *each* is moored in 7½ fathoms water. Cape May Lighthouse bearing W. 20° 30′ N. distant fifteen miles and a quarter. The centre of the shoalest ground on which is found twelve feet water bears N. 28° E. from the light ship, distant two miles and three quarters. It extends N.b.E. ½ E., and S.b.W. ½ W., three-fourths of a mile, and is half a mile in breadth, and very bold on its eastern edge, as there are twelve fathoms *half a mile* to the eastward of the shoal water. Vessels coming from the northward should *not* run for the light ship while bearing from it between N. 14° E. and N. 41° E. Three-fourths of a mile from the light ship, S.E. there are five fathoms water."—*Coast Pilot*, p. 211.

The following positions determined by the operations of the Coast Survey may be considered as correct, viz.

Sandy Hook Light House	40°	27′	37″	—	74°	00′	42″	W., Jersey shore.
Barnegat Do.	39	45	54	—	74	06	56	"
Cape May Do.	38	55	45	—	74	58	33	"
Cape Henlopen Do.	38	46	35	—	75	05	37	Delaware.
Montauk Point Do.	41	04	10	—	17	51	58	Long Island.
Fire Island Do.	40	37	46	—	73	13	38	"

J. W. P. LEWIS.

The Hurricane in the West Indies.

Extract of a letter dated H.M.S. Rodney, at Havana, 9th October, 1844.

A most fearful hurricane visited this harbour, and its vicinity, on the night of Friday, and morning of Saturday, the 4th and 5th inst. During the whole of Friday, the weather was squally, with heavy showers, wind steady, at N.E. Towards sunset the wind freshened to a strong breeze, and at midnight had risen to a heavy gale, and from thence till 10 a.m. of Saturday, it blew terrifically. In fact words cannot convey any idea; the only comparison which may lead to it, is to state that the whole harbour presented the appearance of a snow drift; objects occasionally discernible at a distance of a couple of cable lengths, and again obscured, the rain falling in a deluge the whole time. From 10 a.m. the wind gradually drew to the northward, and at 11 had got to N.W. and from thence to West. The moment the wind began to vary, the fury of the tempest was over, and at noon had subsided to a fresh gale with slight rain. About this time the greatest part of the harbour was visible, and what a scene of devastation. From our poop could be counted, 23 vessels, either floating bottom up, or blown high and dry on the beach, wreck and cargo floating in all directions, ships dismasted, and driving pell-mell. On the following day, I went round the harbour, and counted eighty-five vessels sunk or blown completely out of the water; one schooner actually in a field, some yards above the beach. I have heard that there are five more on the beach, near the Punta perfectly wrecked—making a total of ninety vessels, varying in size, from sixty to 300 tons. I have also to mention the loss of Her Majesty's Catholic Brig, Cubana, of eighteen guns, which went on shore, on Saturday, about ten miles to windward, having only left this on Friday forenoon, as convoy to the Ipswich packet; fortunately only one man was lost, the packet returned with no damage. The sheers at the Machina were blown over in the opposite direction to which they were drooped, smashing in their fall two houses from roofs to foundation; the Semaphore, at the Admiral's, also the large shed on the wharf near the Captain of the Port's stairs, shared the same fate. An extraordinary circumstance occurred, during the height of the tempest; immediately a-head of this ship, a large wooden house of two stories was lifted entirely into the water, and floated perfectly upright, until within a hundred yards, and then fell to atoms; it appeared not to have been damaged in the least during its flight.

The country it is reported, has suffered most fearfully, the fodder for the cattle, and Indian corn is swept away, gardens laid bare, and plantations rased to the ground; the land which on Friday was most luxuriant, to-day is bare and desolate, not a vestige of verdure meets the eye. The barometer, on Friday, gave indication of a great change; it gradually fell from 29·85 at 6 p.m. till 8 a.m. on Saturday, when it was down at 28° at which it continued until 9h. 30m. a.m. when it rose again.

With the exception of the loss of the jolly boat, dashed to pieces, while hanging at the quarter-davits; the damage sustained, consists in the loss of part of both hammock nettings and cloths, the

signal lockers broken, from being blown away from the break of the poop, but secured before they went overboard. The lead nailed over the edges of the quarter-gallery, about six inches broad, was wrenched off, and rolled up like a sheet of paper. I have never witnessed anything equal to it, nor could have imagined such force of wind. Many lives have been lost, and the estimated damage of property in the harbour and city is stated at the enormous sum of one million sterling; so great has been the havoc, that His Excellency, the Captain General, has issued a proclamation, permitting the importation of all species of provisions, duty free.

I have, &c.

To the Editor. (Signed) ROBT. MC CLURE,
Lieutenant Commanding.

Another Letter, dated Nassau, 22nd October, from an Officer, says—"On the 5th inst. the hurricane, that was so severely felt at the Havana, Matanzas, and Cay West, reached this place, but did not do much damage. The gale commenced with the wind from S.E. and gradually drew round to South, ending about S.W. By this it appears, according to the Redfield theory, that the general direction of the (focus of the) gale must have been about N.b.E., and remembering that the Havana lies S.W.b.W., from us, we may consider ourselves fortunate in having escaped so well. A great many wrecks have occurred on the bank, to the westward of us, attended, I am sorry to say, with great destruction of life.

DOINGS OF THE HURRICANE.

SIR,—One of the earliest records of a hurricane in England, may be found in the old poem of "Pier's Ploughman." The storm occurred on Saturday, the 15th of January 1362, or nearly 493 years ago. It is thus alluded to :—

"And the south western wind,
If Saturday at even
Was perlich: for pure pride,
And for no point else.
Pyries* and plom-trees
Were puffed to the earth,
In ensample that the segges*
Shulden do better.
Beeches and broad oaks,
Were blowen to the ground,
Turn'd upwards his tails.
In token of dread—
That deadly sin ere doomesday,
Shall for-done‡ hem all."

This storm from its effects—the rooting up, and prostrating the largest trees, must have been a very severe one; and we cannot at all

*Pear-trees. †Men, people. ‡ Undo—ruin.

wonder that in such an age of superstition and loose manners—the poet should have seized upon the physical phenomenon as a handle, wherewith to fix his rod for lashing the follies and vices of the times. But the idea of these awful visitations being sent to punish, or correct mortals for their transgressions, as expressed in the lines of our ancient countryman, is seriously entertained, and prevalent (with more force probably at the moment of occurrence,) at the present day, as may be observed in the accounts of these tempests, given in the West India papers. There seems to be no reason for considering them as "scourges," but rather the contrary, as they are harbingers of health and renovation, notwithstanding the loss of life that attends their transits, and the devastation committed on the lands, which happen to lie in their routes.

One of the last "doings" of the wind agent, took place on the 4th day of August last; and the woeful effect of its violence is thus mentioned. The town of Matamoros, in Mexico, was destroyed by a hurricane (probably the same that was experienced on the 8th, further northeasterly) on the night of the 4th of August. The storm was more tremendous in its effects, than those of 1835 and 1837. More than two-thirds of the houses of the city were prostrated, and the remainder were more or less injured. The extent of the loss of life has not been accurately ascertained. A correspondent of *El Censor de Vera Cruz*, estimates the whole loss as above two hundred souls! The direst destruction, it appears, took place at the two mouths of the Rio Grande, some 30 miles below the city of Matamoros, where scarcely any were saved! The greater part of the population were compelled to live in *shanties*, built among the ruins of their houses. Hence it is not alone—

> "Where the God of day his power proves,
> Where lightnings flash, and black scud flies;
> * * * * * *
> That, booming along with the Tropic breeze,
> O'er mount and dale of the green Caribbees;
> As a scorching flame—it onward moves,"

but to the very bounds of the western seas that death and devastation accompany the hurricane. And, upon the whole, within and bordering on the Tropics, it seems probable that the disasters caused by its presence are to a greater amount, both as regards the loss of human life, and the destruction of property, experienced on the land above those which happen on the ocean; but these also have been heavy, several ships in company having foundered, at the same time, with all their crews; the instances are many, and many it may be presumed, occur whose fate has never transpired. Yet, we have no book guide from the profession, for the instruction of the mariner when, for the first time he finds himself placed in a situation of the extremest peril, where one false step would in all probability doom him to destruction! A tithe, or fraction of the value of one or two courses or top-sails, (that have among hundreds been lost in these storms), would pay for the printing of such a book; and which, perhaps, might eventually be the means of saving hundreds of valuable lives. The tempests which

[illegible]

[illegible]

[illegible]

as echoed and re-echoed from the rocky eminence in the narrow Fiords.

From another quarter we have the following account:—On the 13th of September, about half-past three in the day, there suddenly arose at Constantinople, a whirlwind, which in a moment filled the air with dust and light bodies. It crossed the port with the greatest rapidity, raising the sea in its passage, and doing considerable damage. In the front of Yali-Kiosque, a boat was overturned, and a man, three women, and a child were lost. Several *caicques* were capsized at the entrance of the Bosphorus, but fortunately the persons in them were picked up; among them Hussein Pacha.

An Austrian vessel, the Gloria, was blown over, and the crew only saved through the exertions of the Russian packet, the Kersonese. The whirlwind luckily was of short duration, and in a quarter of an hour the sea was again calm.

A letter from Cette, near Montpelier, gives an account of the effects of a meteor which passed over that place on the 22d of October last. The Government establishment of engineers, a very extensive building, was utterly destroyed; even the walls not left standing. The zinc roof of the building was carried into the air, and broken into a thousand pieces, which fell in different parts of the town, where they did a great deal of injury. Several other buildings were also destroyed; and the place is described as resembling a town which has undergone the horrors of a siege. At the same time, a storm prevailed in the harbour, which wrecked and sunk six or seven large merchant vessels, besides a great number of fishing and other boats. The number of persons who perished is calculated at about thirty, but the exact number was not known, and many were missing whose fate was still uncertain. A great number, besides, are severely wounded from the falling of houses; and even at the time when the accounts came away, the people were afraid of a renewal of disasters, as the storm was not yet over. The inundations have been very great.

A hurricane passed over some of the Caribbee isles; among the rest St. Kitts is stated to have suffered. And it appears that the shocks of an earthquake were experienced in British Guiana, Trinidad, Grenada, and St. Vincent, on the 29th of August last.

TYPHON.

To the Editor.

THE WRECK OF THE BRISTOLIAN.

THE south-west coast of Africa, is at the present moment, a subject of much interest; we therefore give the details of this distressing shipwreck, in order to impress upon ship-masters, the necessity of extreme caution in approaching this part of the coast, which from the strong northerly current always running, is very dangerous. We beg to invite further communications on the currents.

The Bristolian under the command of Captain Cooke, a very intelligent and able navigator, left Bristol, on the 29th of March last, and made a quick passage to within a short distance of her destination (Ichaboe.) We give *extracts from* the log:—

[illegible]—June [illegible] and thick foggy [illegible] days previous; the [illegible] We considered [illegible] 14° 10 E. At 4 [illegible] the ship missed [illegible] among the breakers and [illegible] the quar- [illegible] reef. At [illegible] among the rocks; [illegible] the keel hung [illegible] making heavy [illegible] away the spars, [illegible] spar [illegible] with great diffi- [illegible] rope to a rock, by [illegible] the remainder [illegible] breakers. In five [illegible] the rocks, [illegible] having fallen [illegible] a quantity of bread [illegible] weather, [illegible] picked up the long- [illegible] we said, and [illegible]

[illegible] with pieces of [illegible] of [illegible] and two puncheons of [illegible] This was indeed a great blessing, otherwise [illegible] sand-hills, the [illegible] procure [illegible] we could find along the beach, and [illegible] were washed ashore. Disco- [illegible]

[illegible] the wreck, it [illegible] found all [illegible] and most of the things [illegible] lived a little, with [illegible] In the night we saw [illegible] to [illegible] planes, and part of [illegible] the blessing of God, [illegible] alterna- [illegible] which we suppose [illegible]

[illegible] the wreck, and found a [illegible] the boat, and a [illegible] and repaired her [illegible] along the beach, some [illegible] found a spaniel dog we [illegible] keeping watch.

[illegible] the boat and get her along the [illegible] a distance of half a mile, to a spot [illegible] as safe as the surf should

beasts outside; came along the beach on our return, and found a barrel of pork nearly buried in the sand, about three miles from our tent; brought as much as we possibly could with us.

Friday, 7*th*.—At midnight: fresh northerly winds with a very high surf. At daylight: weather still the same. Found it quite impossible to attempt getting the boat off. Noon: weather still the same. Hauled the boat higher up the beach clear of the surf, for fear of her going to pieces during the night. Found all our water nearly leaked out, which places us in a most awful situation, having a tremendous sea in front and wild beasts at our back, and perhaps much wilder men near us, so at the present moment we see no possibility of escape.

Saturday, 8*th*.—Midnight: more clear at one, but very thick round the horizon, with a shift of wind from the southward. The surf still very high, no chance of launching the boat this day. At noon every one went in different directions to try if he could discover any inhabitants, but without effect.

Sunday, 9*th*.—Midnight: thick hazy weather with a heavy dew falling like rain, everything perfectly wet about us, scarcely able to keep a fire. Daylight: variable winds from the north to south; surf still very high; found it impossible to launch the boat, the sea only coming on a level with the outer rocks.

Monday, 10*th*.—Midnight: the surf still the same and thick wet weather. Daylight: the surf more moderate, prepared the boat for another start, but the sea coming in more violent, abandoned it this day. We find ourselves getting more miserably situated every day, having nothing but bare boards to lie upon at night, and our provisions getting very small, thought it prudent to prepare to walk to Angra Pequena, and if we should not find any vessel there to walk on to Ichaboe, which we anticipate a very difficult task, having nothing but quick sands and sand hills to encounter. At 4 p.m. a very high surf: the sea coming in suddenly nearly washed us out of our tent. Removed further back behind a sand hill.

Tuesday, 11*th*.—Midnight: wind off the land with an increasing surf. Daylight: wind still off the land, with a very high surf. Find it quite impossible to launch the boat as yet, but we hope to have one more chance to do so before we attempt to walk. Noon: fine warm weather; the only warm day we have had since we have been here.

Wednesday, 12*th*.—Midnight commences with dark hazy weather. Daylight: fresh breezes from the south-west, and thick foggy weather, with a heavy dew falling. The surf still continuing, find it impossible to do anything in respect to launching the boat or putting anything in her, as the sea is now running in so heavy, washes her about from place to place. Took the little water and provisions we had left behind a sand hill, to prevent their being washed away; made the boat well fast to one of the sand hills, and secured the materials belonging to her.

Thursday, 13*th*.—Midnight: fresh winds and thick foggy weather, with a heavy dew falling. Daylight: strong south-west wind and a high surf; still impossible to launch the boat. Animals continually coming and stealing our provisions during the night;

... Midnight: light winds off the land and fine weather. Daylight: ... the same, the surf not so high as usual. ... and although a dangerous experiment, we ... her, and ... the anchor. The sea coming in ... to attempt to launch the boat this evening, but by the morning of June we are in great hopes of being able to ... in the morning.

... Midnight: light winds and fine weather, with a light swell. Daylight: ... surf, got the boat down the beach ... launched her out, and ... her. At 10 a.m. sent two ... and a few of the men to haul on the line as the rest launched ... and at last succeeded in getting her off, although with great difficulty and danger. The line ... a fair breach over her and ... her, which would have been the case had it not been ... the line which ... us, and we hauled her out in safety. ... her with two ... sculling-oar booms for masts, ... for fore and main sails; the head of the ... for a jib, and a ... for a square sail: and proceeded on ... It was a great blessing that we launched her this ... as our water and provisions would not have lasted us more than ... days.

... Midnight: fine and clear, running along the land. Daylight: light winds and fine weather. Noon: passed Albatross rock, with Pennsylvania island in sight. At 4 p.m. a windy appearance, and having no ballast in the boat thought it prudent to run under the lee of the island for the night, and came to anchor in two fathoms water in a snug little bay close in.

... Midnight:—At daylight got under weigh from Pennsylvania island, and stood towards Angra Pequena. Noon: light winds and hazy weather, pulled towards Pedestal Point. At sun-set saw two vessels lying under Seal island: came to anchor under Pedestal Point for the night.

... Midnight.—At daybreak got under weigh and pulled towards the shipping. At 7 h. 30 m. came alongside the barque Achilles, of ... Capt. Nicholas, and were treated with the greatest kindness by him, and also by Captain Day, of the brig Wellington, of Bideford; who ... the crew among them, making seven in the brig, and the ... remained on board the Achilles.

THE BAY OF HONDURAS AND THE MOSQUITO SHORE.—*By Lieutenant* ... R.N. Spec. 1758.

The Bay of Honduras though frequented by the English for many years ... was considered a sanctuary claimed by the Spaniards as their ... who have ... times plundered and drove the English from ... The last time was in November 1779, since which none are re... there, but ... of them settled on the Mosquito Shore, where they ... mahogany and ... Great part of the country ... and where the best logwood grows, is low and marshy, part

of which is generally overflowed with 4 or 5 feet water on it once a year, or sometimes once in two years. Then is the time for the Bay men to carry in flats to the Barcaderos,* for the logwood which they had cut and heaped in the dry season. For as logwood will not swim, it lies in those heaps, (which are sometimes far inland) until the flood rises high enough to bring their flats to it. Although a great part of the Bay is sometimes overflowed with water, yet there are large tracts of fine land, which are never overflowed, but yield good pasturage for cattle, and will produce plenty of American fruits and vegetables.

I cannot help thinking, but the Bay of Honduras might be of much more importance to Great Britain, than it ever yet has been, provided in a time of war with Spain, a formal possession by conquest of the Bay was taken and avowed an English Colony under proper practicable regulations and restrictions, adapted to the situation and circumstances of the place; all which might be done with very little noise or trouble, and an inconsiderable expense to the government. What I think has hitherto detrimented our mother country, is the trade formerly carried on in the Bay by the Dutch, who were generally freighted from Holland to Curracoa, when they used to deliver the greatest part of their cargo, and then run down to the Bay of Honduras with sundry goods, such as Holland stripes, checks, calicoes, cambrics, muslins, Osnaburghs, sail-cloths, cordage, powder, shot, small arms, cutlasses, and other hardware; also brandy, Geneva, arrack, wine, sugar, earthen and China ware, &c.; and it was remarkable those Dutch ships were always the quickest loaded, and with the best wood. Large quantities going to Holland on freights (one half for the other) by which the principal Baymen's property was lodged in Holland, and the Dutch supplied foreign markets with logwood, much cheaper than the merchants in England could do; for great part of their remittances were usually in goods at a cheaper rate than the English vessels afford them, though not cheaper than I imagine they might do—if a means of securing all the logwood to Great Britain could be effected.

The best method I can think of would be (provided the Bay was settled by the government as before hinted) for a small company of merchants to contract for the logwood cut there on certain terms at fixed prices; and to send ships with proper goods to purchase part, and carry away the other part on freight for those that wanted to ship it. At the same time proper regulations might be made to prevent the Dutch trading to the Bay; for besides the logwood, fustic, and other dying woods, there are also great quantities of fine mahogany. As for the North American Traders to the Bay, most of the logwood they receive, which is very considerable (for their provisions and iron ware) is sent to Holland or Hamburgh, for I am informed they use but little themselves, and very little of it goes to England.

The Mosquito Shore.—Black river for near forty years past has been the place mostly inhabited by white people, chiefly occasioned by its being the rendezvous of the logwood cutters, when expelled the Bay of Honduras by the Spaniards. And as many of them had sufficient reasons not to expose themselves in any British dominions, they chose this place

* Corruption of "*Embarcaderos*", or places for Embarking.

as a sanctuary, where they could live a lawless and abandoned life with impunity; until intelligence from their scouts (who were frequently on the look out,) informed them the Spaniards had again quitted the Bay. As those expulsions often happened, they caused many ships and vessels bound for that place to stop here for intelligence, and learn whether there was any probability of getting loaded with logwood, in case they went down, if not, to alter their voyage to some other place—which those of any honesty did; when others of a different stamp, rather chose to sink or cast away in some convenient place the vessel they were entrusted with, and convert the cargo to the use of themselves and associates—which gratified and set them up for Baymen ever afterwards.

This practice for a while succeeding, encouraged others of the same stamp to get credit for considerable cargoes, under pretence of selling them on commission for their creditors; which I believe some merchants in Jamaica and North America have suffered by.

This by degrees brought greater quantities of European goods to this place, than the inhabitants had occasion for, which induced them to open an illicit trade with the neighbouring Spaniards; who readily embraced the opportunity of this illicit trade, which has ever since been carried on, and sometimes to a considerable amount and advantage to the adventurers; especially since there has been some of a different stamp from the first settlers, and who now live with some tolerable decency. Yet time and more fresh inhabitants, who are endowed with good moral principles can only put an end to many old pernicious customs of the place (which may not be proper to mention here.) The soil hereabouts for half a mile from the sea side is mostly sandy, the ground in some places low and swampy, with Mangroves. Up the rivers and lagoons it is more fertile, and produces plenty of Indian corn, plantains, yams, and other ground provisions; also sugar canes which the inhabitants now propose making into rum. In the rivers and lagoons are abundance of fish; in the woods, venison, pecary, and wild fowl; and on the sea coast a great plenty of the finest turtle, or tortoise, in March, April, May, and June, and again in August and September.

The dry seasons are generally reckoned from the beginning of September till the latter end of May, or beginning of June; then the wet seasons are expected, which commonly begin with squally weather, and continue more or less till the middle of July; then set in rains till the latter end of August, or beginning of September. The norths are expected early in November and blow by intervals till February. They are chiefly expected about the full and change of the moon, and are most violent in December and January, during which time few vessels choose to go to Black River, that draw more than five feet water, otherwise they cannot go over the bar, and on the outside it is an open and dangerous road, a lee shore, and in a north, a violent great sea runs, and no harbour or shelter for a vessel to the eastwasd, nearer than Cape Gracias á Dios, nor to the westward than Rattan or Bonacca. The country from Black River to Cape Gracias á Dios, and from thence to the southward as far as Blewfields is chiefly inhabited by the Mosquito Indians; not above twenty white men residing on that long tract

the place; he manufactures a considerable quantity of mahogany and tortoiseshell, &c., which he exports to Jamaica and the Northern Colonies. I must say he has taken great pains in civilizing and taming numbers of his neighbouring Indians (the Woolvas and Cukeras) in the manner he has done; for on his first going there they were almost wild, having very little commerce with any English, less with the Mosquito men, and none with the Spaniards, and I am sorry to say that through the instigation of a few ill-disposed people (both Whites and Musteas) numbers of these poor Woolvas and Cukera Indians have been lately kidnapped by the Mosquito men, and sold as slaves to their instigators, who make a considerable profit by disposing of them a second time.

This treacherous practice, I am informed, was first set on foot by a few notorious villains, who wickedly and falsely instilled into the heads of the Mosquito men, that this handful of poor wretches was going to make war with them. Although this preposterous scheme (may by all reasonable people that know any thing of the nature and situation of the Mosquito men, Woolvas and Cukeras,) be looked on not only as improbable, but also impossible for them to think of such a thing, nevertheless the gain the Mosquito men and their instigators find by this trade of Indian catching, induces them privately to pursue it by all opportunities; neither is it in the power of the superintendant to put a stop to it, it being 400 miles from where he resides. As for the harbour of Blewfields, it might be easily fortified, and there is plenty of stone fit for such purpose, and oyster shells sufficient for white lime.

St. John's Castle on the Lake Nicaragua stands on a rock of an easy ascent. In it there are twenty-five guns, eighteen brass, and seven iron of eighteen and eight pounders. It is generally garrisoned with about 100 men, most of them forced there against their wills for misdemeanors, and kept there all their lives, or till they are old, and unfit for service. The other part are country peasants who go willingly for pay. The castle is a square built of stone, with a dry ditch round it of about six feet deep, from the bottom of which to the fort wall is about 15 or 16 feet.

Carpenter's River is called by the Spaniards Rio Matina. About 70 miles up this river lies a Spanish town, called Caratagua, which produces large quantities of the best cocoa, or chocolate. To this river's mouth English vessels used to resort and trade with the Spaniards for that commodity, also for considerable sums of money, &c. The Spanish traders of this place having appointed some English vessels to meet them there in 1759, where they promised to be with proper effects to trade, accordingly on the 26th of that month, 3 sloops and 3 perryaugers from Curacoa, Jamaica, and the Mosquito shore arrived, and on the 28th dealt with the Spaniards to the amount of twelve thousand pieces of eight, and had fair promises for a larger sum in a few days. On this assurance, the English and Dutch by persuasion of the Spaniards, left their vessels at anchor without the bar, and erected tents on the banks of the river, where they carried goods, and waited for their dealers to come back, which they did on the morning of the 30th about four o'clock with a body of armed men, who rushed into their tents, surprised, and murdered about sixty souls,

only two white men, and a few Mosquito Indians escaping by jumping into the river and swimming over it. As several Mosquito men, as well as English, as Dutch, were killed at that time, the Mosquito king resolved to be revenged on the Spaniards of Carratagua at a proper season. Accordingly in September 1760, Dillsen, Admiral of the Mosquitoes, with six perryaugers and 150 men went to Carpenter's river, where they surprized and took a Spanish breast-work, with four small carriage and six swivel guns, and seventy or eighty Spaniards, thirty of which they shut up in a thatched house, and burnt them alive; twenty or thirty more they put to death in cold blood, and eleven they brought away prisoners with nine perryaugers, which the Spaniards had taken from the English within the two last years.

Boca Toro is a good harbour for ships. The Islands near it are good lands and high, as it also is on the main. From the mountain (by the natives' account) the South Sea may be descried on a clear day. This place was in possession of the Boca Toro Indians, till the Mosquito Indians at the instigation of some Jamaica traders in August 1758, landed about 300 men in the night on an island, where they surprised and destroyed numbers of them, and brought away four or five hundred prisoners, whom they sold as slaves, and the place is now uninhabited.

Up Coco Lay, or Cocle River, about thirty miles, and then about forty miles more over mountains, lies a Spanish town called Panamalu of about thirty white families, and a number of mulattoes and negroes. Near the town is a gold mine, which was taken and plundered the last war by a number of Mosquito Indians, and some white people.

The Mariners' Compass.

Sir.—The mode of suspending a compass needle, adopted by Mr. Dent, and described in the last number of your magazine, is one that would naturally suggest itself to a chronometer maker! With delicacy of adjustment of the weights around the axis, and accuracy of suspension by making both ends of the axis of rotation to act on diamonds and in jewelled holes, a powerful magnetic needle mounted in this way will necessarily prove a sensitive, and, in some respects, a serviceable compass.

There are, however, *objections* to this mode of suspension, which have probably escaped the observation of Mr. Dent, and which I will endeavour to explain. A powerful magnetic needle, mounted in the way described, with all the accuracy and delicacy of workmanship, which watch-makers are capable of bestowing upon it, may either be used as a *dipping* needle, or a *horizontal* needle. If the axis be placed at right angles to the magnetic meridian and on a perfect level, the needle will point in the direction of the *magnetic dip*. If the axis of rotation be raised to a vertical position, the card becomes horizontal and the needle points in the direction of the magnetic meridian. In

Royal Cork Yacht-Club.—A.D. 1845.

Scotland possesses two Yacht Clubs, the Royal Eastern which is not so well supported as it ought to be; and the Royal Northern, a list of which latter appears at page 635 of the *Nautical* for Oct. 1844. Mr. A. Hamilton, of 29, Rutland-square, Edinburgh, is the Honorary Secretary of the Eastern Club; and Mr. J. Allan, of 120, Buchanan-street, Glasgow, the Honorary Secretary of the Northern Club, which is the senior of these two Scottish Associations by ten or eleven years. The many Yacht Clubs of England are enumerated in page 520 of the August number of the *Nautical*, and detailed lists of the Cowes and Plymouth squadrons, appear at pp. 520, 572. Now, in this our January number, we have to set down one of the three existing Yacht Clubs of Ireland, viz. that of Cork, which is known to have flourished so long ago as 1720, an early date; indeed, prior to which we hear of no Yacht Club whatever having been formed or attempted in England, Ireland, Wales, or Scotland.

In 1845, however, we have clubs enough, clubs almost all round the coast, and Hull excepted, we know of no spot where a new one is now very particularly called for; but Hull and Harwich will eventually settle this matter between themselves. R. H. Y. C. will fit the cap of both of them. So let that pass for the present. Our duty to-day is to give some account of the Royal Cork Yacht Club, which duty we now proceed to perform.

It may be first mentioned that in 1832, Mr. Thomas Hewitt, of the Cork Club, wrote and distributed a little pamphlet, containing a reprint of its ancient rules and orders, taking his information from an undoubted original, printed in 1765, and which clearly shows, that the Cork Harbour Water Club, was in existence in 1720, and still increasing in 1760, and we can ourselves remember that up to 1828 it retained this its original appellation. In 1828 it was thought advisable to remodel the club in some measure, when it accordingly assumed the name of the Cork Yacht Club, and in 1830, his Majesty King William the Fourth patronized the Society, and it became the Royal Cork Yacht Club.

Before giving the list of the Yachts belonging to the Royal Cork Yacht Club, in 1845, we think it may be interesting to subjoin (taken from Mr. Hewitt's pamphlet), the ancient

Rules and Orders for the Water Club of the Harbour of Cork, A.D. 1765.

1. Ordered, That the Water Club be held once every Spring-tide, from the first Spring-tide in April, to the last in September, inclusive.
2. That no Admiral do bring more than two dishes of meat for the entertainment of the Club.
3. Resolved, That no Admiral presume to bring more than two dozen of wine to his treat; for it has always been deemed a breach of the ancient rules and constitutions of the Club, except when my lords the Judges are invited.
4. No Captain to bring any strangers to the Club, unless they should lie at the Captain's house the night before; this order not to extend to the Admiral, who has a right to invite whom he pleases.
5. Ordered, That the Secretary do prepare an Union Flag with the *Royal Irish Harp and Crown* on a *Green Field in the centre*.
6. Ordered, That the Water Club flag be hoisted on club-days early in the morning on the Castle of Hawlboline.
7. Resolved, That six members make a full Club, and that all transactions and matters whatsoever, as are agreed unto by such a number, or more, shall be binding to the members of the said Club.
8. Ordered, That the Secretary have the rules of this Club affixed to some proper place in the Club room at Hawlboline Island.
9. Ordered, that no long tail wigs, large sleeves, or ruffles, be worn by any member of the Club.
10. Ordered, That no boat presume to sail a head of the Admiral, or depart

[illegible] [illegible] [illegible] [

the fleet without his orders, but may carry what sail he pleases to keep company.

11. Ordered, That when any of the fleet join the Admiral, if they have not guns to salute, they are to give three cheers, which are to be returned by the Admiral, and one cheer to be returned by the Captain so saluting.

12. Resolved, That the Admiral of the day, to be the better distinguished do wear at his mast-head a proper small flag.

13. Resolved, That twenty-five be the whole number of the members that this club may consist of.

14. Resolved, *That such members of the Club, or others, as shall talk of sailing after dinner, be fined a bumper.*

15. Resolved, That the members of this Club do entertain in course of seniority, (if in the Kingdom) or appoint another member to take his turn, upon proper notice given him by the Secretary, upon pain of expulsion. [See Rule 27.]

16. Resolved, That all business of the Club be done before dinner, except appointing the time of the next meeting, or presenting, mulcting, and levying fines.

17. Resolved, That every member to be admitted into the club, shall pay (*pro rata*) as much as has been paid by any member, towards building and upholding the Club-room, and for any other necessaries.

18. Resolved, That the captains of this club, who have boats, and shall not attend properly for the future, by sending their boats, (unless they can show very good cause), shall for every such offence, forfeit one *English* crown, towards buying gun-powder for the use of the fleet, which the secretary is hereby ordered to levy, and lay out for the said use.

19. Resolved, That the knight of the island be accountable for all goods and materials belonging to the Club-room.

20. Ordered, That the knight of the island for the time being, do suffer no person or persons whatsoever to go into the Club-room, unless brought by a member, or by an order of five members at the least, under their hands, on pain of being cashiered.

21. Ordered, That the admiral singly, or any three captains whom he shall appoint, do decide all controversies or disputes that may arise at the Club; and any captain that shall refuse to abide by such decision, is to be expelled.

N.B. This order to extend to the chaplain, or any other inferior officer.

22. Ordered, That the fleet meet at Spithead, between the hours of nine and eleven in the morning, but the Admiral may appoint any hour, not later than eleven, as also the place of rendezvous upon extraordinary occasions.

23. Ordered, that the secretary write notice to the captains not present at the last Club, but in the kingdom, of the next meeting, either by post or messenger; the captain sent unto is to pay.

24. Resolved, For the future, that no person whatsoever be admitted or elected a member, but by ballot.

25. Resolved, That no person be suffered to land on the island on any Club-day, unless by leave from the Admiral.

26. (April 21st, 1737,) Ordered, That for the future unless the company exceed the number of fifteen, *no man be allowed more than one bottle to his share, and a peremptory.*

27. Resolved, That each member (unless out of the kingdom) entertains in his turn, or substitutes a member in his room, otherwise the secretary is to provide a dinner, the cost of which is to be paid by the member whose turn it shall be to attend, on pain of expulsion.

In addition to the above Rules and Orders, we are enabled here to give the Sailing Orders.

Sailing Orders for the Water Club Fleet, A.D. 1720.

The fleet to rendezvous at Spithead on club-days, by the first quarter ebb:

any boat not being in sight by the time the admiral is a-breast of the castle in Spike-island, to forfeit a British half-crown, for gun-powder for the fleet.

When the admiral hoists his fore-sail half-up, it is for the fleet to heave a peak upon their anchor, and when the fore-sail is hoisted up and a gun fired, the whole fleet is to weigh.

To observe no one offer to go ahead, or to windward of the admiral, without being ordered. The vice-admiral to bring up the rear, and to wear the broad pendant at his mast-head; the captains to follow the admiral, and to take place according to their seniority, viz.—The eldest captain present to keep on the starboard quarter of the admiral, the second to the larboard quarter; and so on quite through the fleet; if any stranger or strangers join company, it is expected he or they shall receive orders from the admiral.

Observe, that if the admiral wants to speak with any of the fleet, he will make the following signals; if with the vice-admiral he will hoist a white flag at the end of the gaff or derick, and fire two guns: if with any private captain, he will hoist a pendant at his derick, and fire as many guns as the captain is distanced from him, and from the same side. When he will have all the fleet to make sail, he will strike his ensign, and hoist a red flag on the ensign staff, and fire a gun from each quarter. When the red flag is struck and a gun fired then every captain is to come into his proper station.

He will strike his ensign and fire a gun, when he goes about, and for wearing two guns.

When he would have the fleet to come to an anchor, he will show double Dutch colours at the end of his gaff, and fire a gun.

When any of the fleet happens to be in distress, the captain of the boat is to hoist his ensign with a cross downwards, and fire a gun if he can.

If a captain upon an extraordinary occasion, should want to go out of the line, and away, he is to show his ensign in his shrouds, and fire a gun; the admiral, if he gives him leave, will show a white flag in his shrouds, and fire a gun; if not a red flag.

If a captain has any body very sick on board him, and wants to go to the island, he is to make a weft in his ensign to lower his pendant half down, and fire a gun; if he gets the admiral's leave, he will be shown a white flag in the shrouds, if not, a red one, and a gun fired.

When the admiral will have the whole of the fleet to chase, he will hoist Dutch colours under his flag, and fire a gun from each quarter; if a single boat he will hoist a pendant, and fire as many guns from the side as a boat is distanced from him. When he would have the chase given over, he will hawl in his flag and fire a gun.

Every boat is to carry the same sail as the admiral, if she can, and may carry more, so as to enable her to keep company, but by no means to go a-head.

The admiral will, when he comes to an anchor, be the outermost, and the vice-admiral in the centre of the fleet.

Every officer to obey such further orders as the admiral for the day, from time to time shall give him.

The above are the ancient regulations of the "Cork Harbour Water Club," many of which are yet in force in the "Royal Cork Yacht Club" in 1845, which still meets weekly, from the first Thursday in May until the last Thursday in October, and manœuvres under the order of an "Admiral of the Day," post taken in rotation by all the members of the squadron. The Marquis of Thomond possesses a painting by the celebrated *Monamy* of the "Water Club of Cork, in Sailing Order in 1736," a display which is thus referred to in a work printed in London in 1748, entitled "A Tour through Ireland by two English gentlemen."

"A set of worthy gentlemen who have formed themselves into a body, which they call the "Water Club," proceed a few leagues out to sea in a number of little vessels, which for painting, and gilding exceed the King's yachts

at Greenwich and Deptford. Their admiral, who is elected annually, and hoists his flag on board his little vessel, leads the van and receives the honours of the flag. The rest of the fleet fall in their proper stations, and keep in their line in the same manner as the King's ships. This fleet is attended with a prodigious number of boats, which with their colours flying, drums beating, and trumpets sounding, form one of the most agreeable and splendid sights.

We have now only to add, that the detailed list of the Royal Cork Yacht Club for 1845, will appear in a future number of the *Nautical*, and that Dublin and the Shannon will not be forgotten.

The Experimental Brig Squadron.

The following details of the cruise are furnished by a correspondent of the *Morning Herald*:—

Oct. 29.—Tried by the wind in light winds under royals. The trial lasted only two hours and a half, at the end of which the *Flying Fish* beat the *Daring* 130 yards. It is fair to state that this superiority of the *Flying Fish* was owing to a shift of wind in her favour, as the *Daring* held the advantage till then; yet it was an advantage, as proved by the angles, of 130 yards for the *Flying Fish*. The *Pantaloon* was third, the *Osprey* fourth (beaten by the *Flying Fish* 1230 yards), the *Waterwitch* fifth, and the *Cruizer* sixth. The *Mutine* and the *Espiegle* did not enter the list this day.

30th—Tried working to windward in a good fresh breeze, unable to carry top-gallant sails. The *Daring* went away to windward of all; the weather came on thick, and uncertainty attends the exact position, but it was nearly as follows:—*Daring*, *Pantaloon*, *Flying Fish*, *Osprey*, *Waterwitch*, *Espiegle*, *Mutine*, and *Cruizer*. No observations were made at the conclusion; but, in two hours and a half, the *Daring* beat the *Pantaloon* 1500 yards, *Flying Fish* 2300 yards, *Osprey* 2500 yards—not measured.

31st.—Another trial by the wind in a fresh breeze, just able to carry top-gallant-sails. The *Daring* stepped out gallantly in the wind's eye of all. After a trial of three hours the positions of the squadrons were nearly as follows. No observations were taken on account of thick weather, but the *Firebrand* noticed the *Daring's* advantage:—*Daring*, *Pantaloon*, *Flying Fish*, *Waterwitch*, *Espiegle*, *Mutine*, *Osprey*, and *Cruzier*.

On the 5th of November a trial took place without the *Daring*, she having parted company the previous night.

Nov. 6th.—Commenced a trial by the wind under all sail. The *Daring* again stepped out in the wind's eye, but the wind changing the Commodore recalled the vessels, and having assembled they were started before the wind which was very light. After a run of four hours and ten minutes the vessels came in as follows:—The *Flying Fish*, *Daring*, *Pantaloon*, *Mutine*, *Espiegle* *Cruizer*, *Osprey*, *Waterwitch*.

8th.—Tried in a good strong breeze, working to windward under treble-reefed topsails. *Daring* showed that this was the weather best adapted to prove her superiority. At the end of 5¼ hours *Daring* had gained dead to windward as follows:—On the *Waterwitch* 2400 yards, *Flying Fish*, 3300; *Pantaloon*, 3800; *Espiegle* and *Osprey*, 4000; *Mutine*, 4900; *Cruizer*, 8000. This was the most decisive trial. The qualities of the *Waterwitch* (Mr. White's first model for a cruiser) varied much on different days. This day it will be seen she followed the *Daring*. The *Flying Fish* carried away her jib-boom in trying to set the sail.

There were no trials between the 8th and 18th November. On the 10th all the squadron parted company in a gale of wind, excepting *Daring*, *Flying Fish* and *Waterwitch*, nor did they again meet until the 17th. The cause as-

any boat not being in sight by the time the admiral is a-breast of the castle in Spike-island, to forfeit a British half-crown, for gun-powder for the fleet.

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Thomond possesses a painting by the celebrated [illegible] of Cork, in Sailing Order in 1736," a display [illegible] a work printed in London in 1749, entitled [illegible] English gentlemen."

"A set of worthy gentlemen [illegible] which they call the "Water Club" [illegible] ber of little vessels, which [illegible]

leeward, although they have filled all her tanks with salt water. At the end of a six hours and a quarter's trial we had gained as follows;—On *Waterwitch*, 1500 yards; *Espiegle*, 4800 yards; *Flying Fish*, 7500 yards; *Pantaloon*, about five miles, but her distance could not be measured, as she was barely in sight; *Osprey*, *Mutine*, and *Cruizer*, were out of sight, dead to leeward, about eight miles distant. Had I carried topgallant sails I might have been another mile to windward; but as the weather was so thick, I did not think that any angles could have been taken, moreover, I wished to show that we could beat them all under less sail. The *Waterwitch* lost a great deal every time in tacking, she had not men enough to work her properly, having 22 men on her sick list, out of her small crew. All the brigs have very large sick lists, averaging from 15 to 20, owing to their being so very wet. *Daring*'s sick list has always been the smallest. I have now only eight, and we have very seldom exceeded ten, mostly boys and marines who suffer from sea sickness.

One of my officers yesterday received a note from a friend on board the *Firebrand*, who says there is but one opinion on board the *Firebrand* respecting *Daring*. I have written several letters respecting her capabilities, copies of which I will send you with this letter. I think the *Espiegle* is decidedly rising in the scale, and I think that the *Mutine* would have beaten the *Flying Fish* yesterday, had she not carried away her jib-boom. I never saw her make so good a start, she is generally the very worst. The commodore gave me an order to supply my spare jib-boom to *Mutine*, thinking, I suppose, that *Daring* is the least likely to carry one away. I am glad of it, for I hope to get another in its place a couple of inches stouter.

December 3rd, off the Lizard.—We made a glorious *finale* yesterday, running into the Channel, we tried with the wind a-beam, going 10½ knots, under all plain sail, except royals. At starting, *Daring* was No. 6 in the line, but she soon passed them all, and led the field in fine style, gradually increasing her distance every half hour. At the end of a four hours trial we had gained as follows—on *Espiegle* 2400 yards, *Mutine*, 2540 yards, *Flying Fish*, 3080 yards, *Osprey*, 3200 yards, *Waterwitch*, 4800 yards, *Cruizer*, 5605 yards, and *Pantaloon*, 10,000 yards. You will see that although the *Daring* beat them all so much, the other four large brigs were very near together, only 800 yards difference between them. The little *Waterwitch* did very well, she cannot be expected to run with the large brigs, but she showed herself off in comparison to the *Pantaloon*. The *Waterwitch* tried to carry a fore-top-mast stud-sail, but it did her more harm than good, and she took it in. *Pantaloon* was sailing on her beam ends all the afternoon. I certainly never saw a man-of-war heel over so much before, she must have sailed with an inclination of about 30 degrees. She does not appear to be any stiffer than before she filled her water tanks.

At the end of the trial yesterday we were close in shore, about three miles from the Wolf Rock, the Commodore then made the signal to part company, and make the best of our way back to the rendezvous, off the Lizard. I put the canvas on the *Daring*, and we were at our post by daylight, where we met the Commodore, the only vessel in sight. The *Osprey* made her appearance this afternoon, but at sunset neither of the others had arrived.

Dec. 4.—Our trials are now over, and we are making the best of our way to Plymouth, with orders to chase the *Firebrand* to the Eddystone, the wind is light and baffling, and it depends more on chance than on good sailing who gets there first. However, I mean to see what I can do by daylight. Perhaps I may not have time to add anything more than to offer my sincere congratulations on your success in giving to the service so matchless a brig as the *Daring*.

I am, &c,

Mr. Joseph White, Ship-builder, East Cowes. H. J. Matson, *Captain.*

The following circular has recently been issued by the Admiralty:—

"It having been represented to the Lords Commissioners of the Admiralty, that the word "port" is frequently, though not universally, substituted on board Her Majesty's ships for the word 'larboard,' and as the want of a uniform practice in this respect may lead to important and serious mistakes, and the distinction between 'starboard' and 'port' is so much more marked than that between 'starboard' and 'larboard,' it is their Lordships' direction that the word 'larboard' shall no longer be used to signify *left* on board any of Her Majesty's ships or vessels.

By command of their Lordships,

Sidney Herbert.

[illegible]

[illegible]

[illegible]

Now, I think it is not of very great importance, considering what occurred subsequently, whether at the time they quitted the vessel (the Two Friends) the master and crew entertained any rational expectation of being able to rescue her from the perilous condition in which she was placed, because it is quite clear that the vessel did become entirely and altogether abandoned. When the master and crew reached the Havana they were unable, even with the assistance of the consignees, to obtain the aid of any person to go to the spot on which the ship lay to endeavour to rescue her. They stated that the spot was so dangerous that no person could be induced to embark in such an enterprise. Now, with regard to the John Blake, her voyage was from Colombia to Cork or Falmouth for orders. She steered from Cape Antonio, in Cuba, intending to sail homewards; but on March 6th, she, as it appears, when 30 or 40 miles north of Cape Antonio, struck on a reef of rocks, and also got off in the first instance, but at 11 o'clock at night struck again. It is stated in the protest and affidavit, that after 48 hours' exertion the crew were forced to abandon her; and it appears that the abandonment actually took place on the 9th March, at about half-past 12 o'clock in the morning; that they left in the long-boat and jolly-boat, and equipped themselves with some provisions, sails, a compass, and, as subsequently stated, though I think it a matter of no importance whatever, with two coils of rope, for the purpose of saving their lives. They made for the island of Cuba, but whilst advancing towards a part in which they hoped to obtain shelter, they met with the Two Friends, in the abandoned state to which I have before referred. They state that she was lying with her two anchors down. They weighed the anchors, threw overboard part of the cargo, and finally they got the vessel to sea; that they then pursued a course towards England, because they had no information as to the destination of the vessel, but from the inscription on the stern they had every reason to believe that she belonged to the island of Jersey. Now, in so doing, I must say, I see no reason to doubt that the course pursued by these persons was a wise and proper one.

They state in their protest, in rather figurative terms, the reason of their determining to adopt this course, for they say "they did it for the benefit of the ship and cargo, and all persons interested in the same, for the preservation of their own lives; and they did so after having, with the deepest deliberation and concern, adjudicated which was the best course." Now, there were several motives which induced them to adopt the plan they finally pursued—viz., the safety of the vessel and the cargo they had boarded, and the preservation of their own lives; and though it is subsequently stated in the Act on Petition, and also in the affidavit, that they might have reached the Island of Cuba in safety, yet the court is to recollect the undoubtedly dangerous spot they were in with their boats, at a distance of 35 miles, according to their own statement, from the port which they wished to reach, and subjecting them to some peril. But on the 20th April they reached Dartmouth, having, according to their statement, encountered some bad weather. The value of the property is 1,237*l.*, and, of course, there are some deductions which must be made, on account of a claim which is to be preferred, in consequence of the Proctor of the Admiralty, in the first instance, taking possession of the property, and procuring a valuation thereof. Now, I am of opinion, that this is, beyond all doubt or question, a case of derelict; but, at the same time, it is not one of any peculiar merit, but quite the contrary. The amount of reward to be allotted in a case of derelict is, as is very well known, entirely in the dicretion of the court. In a very early case Lord Stowell said, that formerly it used to be a moiety; but that practice has long been departed from, and those who have sat in this chair have, for a length of time, determined that they will apportion the reward according to the merits of those who claim to be salvors, not exceeding a moiety of the proceeds, except, perhaps, in one or two particular cases.

Now, it appears to me that, before determining what proportion of the value

constable of Liverpool, had a numerous brigade of his able force on the spot and though they were judiciously placed, their principal utility, we are happy to say, consisted in heightening the general effect of the procession by their presence, for their interference, in an official capacity was, in no instance coming within our notice, required. Not the slightest accident or contretemps of any kind occurred, either during the procession or at any other stage of the proceedings throughout the day. Indeed no one essential that can be imagined was wanting to the completion of the whole affair from first to last; nor did anything arise calculated in any shape to deteriorate from the extreme satisfaction that must accompany a retrospect of the important occurrences, from the commencement to the close.

Laying the Stone.—The time named for this important ceremonial in the programme was two o'clock, and shortly after that hour it accordingly took place, with almost every conceivable concomitant that could impart willing and impressiveness to such an occurrence. As was the case throughout, the arrangements here were most admirable, and appeared to give, as they must have done in reality, the completest satisfaction to every one present. Beautiful as the weather had been the whole of the day, it was even more beautiful at this particular moment. On the vast platform were a large number of ladies, who afterwards were present at the ball, and most of the gentlemen, whose names will be found in the list of dinner guests. The whole body of the procession deployed on the ground opposite the stone, and as viewed from the river, the sight which this immense host, arranged, as it were, in a natural amphitheatre, and with all their showey paraphernalia gathered about them, presented, must, we imagine, have been one of the most striking and majestic any of the spectators, probably, ever witnessed, and the like of which can hardly be hoped to be seen again.

The trowel (to borrow the words of our contemporary of yesterday) was designed and made by Mr. Joseph Mayer, of Lord-street, and does him much credit, alike for the beautiful classic feeling about it, and the daring innovation made on the old angular shape of the usual trowel. The form of it is that of the Greek helm or paddle, on the blade or flat part of which is chased in alto-relievo, Terra, the Goddess of Earth, and Neptune, God of the Sea, in the act of calling into existence Commerce and Navigation; which are strikingly pourtrayed by a lovely undraped female crowned with an antique Proa; with her arms folded across her bosom she affectionately holds in her right hand a clavus. The god and goddess, arrayed in their appropriate symbols, the trident and dolphin, turretted cornet, and cornucopia, with their heads a little inclined, are looking approvingly on the beautiful being of their creation. The handle is composed of a dolphin, which from the curved form it assumes gives the whole an elegant and unique appearance, worthy the acknowledged taste of the designer. Above the figure is engraved, in classic letters, the following inscription: "Presented to Sir Philip de Malpas Grey Egerton, Baronet, M. P. on his laying the foundation-stone of the Birkenhead Docks, XXIII day of October, MDCCCXLIV, in the VII year of the reign of her Majesty Queen Victoria." And on the back of the trowel the names of the Birkenhead Dock Commissioners, with those of the engineer and solicitor. The whole is surrounded by that beautiful Greek border, emblematic of the waves so often seen on the early Etruscan vases.

The following is the inscription engraved on the brass plate on the base of the stone, and which engraving was executed by Mr. Leatherbarrow of South John-street.

"The first stone of the Birkenhead Docks was laid on the 23rd day of October, 1844, in the seventh year of the Reign of her most gracious Majesty, Queen Victoria the first, by Sir Philip de Grey Egerton, Bart., M.P. for the southern division of the county Palatine of Chester. Birkenhead Dock Commissioners:—David Appleton, William Adamson, M. F. Brownrigg, Christopher Bentham, John Deane Case, William Cole, T. A. Dale, Richard Fry,

Thomas Gilbertson, J. H. Greene, William Horner, J. H. Hind, John S. Jackson, William Jackson, Alexander Kerr, Daniel MacNicol, Joseph R. Pim, Samuel Stansfield, John Sudlow, C. A. Watson; Joseph Mallaby, Clerk; James Meadows Rendel, F.R.S. Engineer; John Tomkinson, Contractor; J. B. Leatherbarrow, Sc."

Sir Philip Egerton mounted the stone, which was the signal for a burst of enthusiastic plaudits from the assembled multitude; the band at the same time struck up the national air of "Rule Britannia." When the cheering had subsided, Sir Philip spoke as follows:—

"Ladies and Gentlemen.—It has been customary from time immemorial in this country, as I believe also in other parts of the world, to celebrate with such pomp and circumstances as the occasion may seem to require, the commencement of works, either public or private, which from their magnitude or importance are deemed of more than ordinary consequence. It is in compliance with ancient usuage, and in obedience to the liberal invitation of the Commissioners, that we are assembled to witness this magnificent spectacle, prepared with no ordinary care, to celebrate the inauguration of the foundation-stone of the Birkenhead docks. It has been my lot frequently to be present at ceremonials of this description, and I have a vivid and distinct recollection of most of the events of the kind which have taken place during the last few years. For such occasions are not like the ordinary or passing events of the day, making an impression for the moment, and then passing into oblivion. They form epochs in our national history, (hear), milestones to the high road of time. They are a species of *memoria technica*, enabling the mind to recall, not only the event itself, but the concurrent and contemporaneous events of history.

"I have a very distinct recollection, I say, of most of these ceremonials, and I can state most decidedly, and in all sincerity, that I have failed to call to mind any which either for its intrinsic worth, or for the important result likely to flow from it, can be compared for a moment with the undertaking which is this day to be commenced, (hear and cheers.) I am aware that I am making use of terms most comprehensive, that I am submitting myself to the charge of allowing prejudice and partiality to bias my judgment; but I trust to show that I have not made use of terms of exaggeration. I do not estimate the value of a work of this description by its superficial areas, or by the sum of money that may be expended upon it, but by the amount of advantage that is likely to accrue from it to mankind at large—(hear, hear and applause.) A bridge over the Thames at London, or over the Menai Straits, is a work of great magnitude, and both reflect the highest honour on the distinguished engineers employed to construct them. But in their application they must be considered as purely local, facilitating the intercommunication between the banks of the streams which they span.

"Others there are of great magnitude, as the Royal Exchange of London, which our gracious Sovereign is about to grace with her presence, and which is well worthy our merchant princes, and a lasting ornament to the greatest commercial community in the world (hear.) Still its nature is limited compared with the results which I anticipate from these works, (hear.) I consider the advantages which will flow from the erection of these docks will not be purely local, will not be only national, but they will be universal, and will be felt throughout the length and breadth of the land, will circulate through the minutest fibres of the trade and commerce of the country, and be circumscribed only by the limits of civilization in the habitable world.

"The idea of converting Wallasey Pool into a series of docks is by no means novel or recent. Nature has been lavish in her adaptation of this part of Cheshire. Every engineer who has visited the district for years past, has been struck with the great capabilities which the locality affords. One of the most distinguished men in British science, Mr. Telford, went so far as to give as his opinion that Liverpool had been built on the wrong side of the river—

(laughter, and a voice, "we shall now have it on both sides.") The late Mr. Laird, many years ago, had an accurate survey made of the pool, and I have have seen, as I dare say many others have done, a very able plan for converting the pool into a series of docks. It will be needless to revert to historical data connected with this plan, they are, I believe, pretty well known. It will be needless to revert to the obstacles and impediments that stood in the way of the realization of these schemes, suffice it to say, that they have been fortunately removed. The pool has been surveyed by a distinguished engineer, who has just taken part in these interesting proceedings. He has drawn out a plan for converting it into a series of docks, that plan has been embodied in an act of parliament, which was presented last session; the bill encountered strict, rigorous, and searching investigation in its passage through both houses; but so manifest were the advantages held out, so able were its clauses supported by the evidence of the most scientific men of the country; above all, so disinterested appeared the motives of those who applied for the measure, (hear, hear,)—that it passed triumphantly through this ordeal, and came unscathed and unmutilated through both houses of parliament, and is now the law of the land,—(loud cheers.) The works to be executed under this act are of a magnitude wholly unparelleled, I believe in works of a similar description. They will comprise, in the first instance, a small tidal harbour of about forty acres, with sufficient water to admit vessels at all times of the tide at which they can cross the Victoria bar—(hear). Then there will be a harbour of refuge of ten acres, with beaching ground of four or five acres extent, devoted to the use of the trading craft of the river. Also a dock applied to the present uses and purposes of the town of Birkenhead. If these were the only objects in view, they would be most valuable and important. But there is to be an opening out of the tidal harbour by gates of vast extent, into a floating pool of 130 acres, throughout the whole of which the water will be of such level, that the banks, comprehending nearly 8000 lineal yards, will be applicable to the purposes of wharfs and yards, landing-places, graving-docks, warehouses, and all other accommodation necessary for a great mercantile harbour.

"Gentlemen, when I contemplate the extent of these works, when I consider the important ulterior consequences which may result from this first initiatory measure, above all, when I look at the extent of building which now clothes the banks of this pool around me, and compare them with what the state of Birkenhead formerly was, I can scarcely believe myself to be in the land of reality. I have been told, that about a century ago, at the time that my worthy ancestor occupied the mansion now so worthily occupied by Sir Edward Cust, it was proved in a court of law that Birkenhead was not entitled to the name of village, town, or even hamlet, as it did not contain three inhabited houses. Whether this be true or not, this I know, from the census, presented to parliament in 1801, the number of houses only amounted to 16; that at the next census, in 1811, that number was increased by only one; that in 1821, that number was increased by three, only by three; that in the next ten years, to 1831, the increase was 400; that in 1841, the number of was 1500, and now I am informed they amount to 2,000, (hear) occupying an extent of street exceeding thirty miles, (cheers.) This I look upon as a case wholly unparelleled in the annals of this country, and if among the number of persons whom I now address, I see a citizen of the United States of America, that country so famous for rising rapid towns, I might even challenge him to bring any analogous instance from her annals (hear, hear).

"I say then, I can scarcely believe the evidence of my senses when I consider the vast rapidity with which this place has sprung up. It appears more as if some mighty magician, with the wave of the wand, had conjured up a flourishing community from the bowels of the earth or from the bosom of the sea, in the full panoply of a commercial community, as Minerva sprung full armed from the head of Jupiter, (loud cheers.) If then the mind can scarcely

contemplate the progress made in this locality, how will we dare to attempt to define the progress of the place? The astronomer is enabled to calculate the velocities, and to measure the orbits, of the heavenly bodies. The engineer is enabled to make his surveys, and from a knowledge of the laws which govern matter, to carry out his designs; but there are certain laws which guide them. But who, who, I ask, shall attempt to define the root and expansion of human enterprise, for upon that alone must depend the extent and prosperity of a commercial community such as this, (hear.) I can fancy, I can picture a forest of masts and vessels of all nations crowding these docks. I can fancy quays and docks and warehouses clothing these banks as far as the eye can reach. I can hear the busy hum of men; I can see the locomotive engine at the back of the warehouses, prepared to convey by railroads *in esse*, as well as *in posse*, the commercial produce those warehouses contain.

"I can look at terraces, and streets, and palaces, and churches, and theatres, and market-halls, and town-hall; and lord-mayors and aldermen, with bailiffs, and maces, and all the paraphernalia which belongs to municipal dignity, (hear, and a laugh.) I can almost shadow to myself a popular member addressing the borough constituency from the city hustings.

"But to return from the fertile regions of fancy to the scenes of reality, I am persuaded I stand at this moment on the rubicon of Birkenhead's prosperity, (great cheers); that, as the Roman general of old, in his progress towards Rome, gained fresh laurels at he advanced, so that Birkenhead will go on in the path of prosperity until she occupies the front rank amongst the communities around. In the words of one of the Liverpool papers, remarkable for their truth, she has the full tide of commercial prosperity in her favour; she has a cheap market, cheap materials to build with, the sanction of all the government authorities; she has the approbation of all the trading and manufacturing interests of the country. With these advantages to start with, I bid her go on and prosper, and from the bottom of my heart I wish her God speed." Sir Philip concluded amid loud and enthusiastic demonstrations of applause.

Mr. William Jackson, immediately after addressing Sir Philip, said, "Sir, the picture which you have beautifully drawn of our future prosperity has suggested an idea to my mind. We shall shortly have a Town-hall, suitable in beauty and extent to the wants of the rising township around, and we wish to grace the walls of that Town-hall with your likeness, as you stood upon that stone to day, that this day may never be forgotten, and that our sons and sons' sons may know who it was that laid the foundation-stone of the Birkenhead docks, (great cheers.) I trust that Lady Egerton will join me in the hope that you will consent to the request. [Her ladyship who stood on the right of Mr. Jackson, bowed assent.] The artist is here; your convenience will be suited; and I ask the favour in the name of Birkendead." (applause.)

Sir Philip, in reply, said, "I am sure, Mr. Jackson, I feel highly honoured. I feel that I have been most unworthy of the prominent situation in which your kindness has placed me. I have, however, endeavoured, to fulfil my duties to the best of my ability; and I shall be happy to accede to your wishes in this case or in any other which you think may tend to the prosperity of Birkenhead."

Here the stone was gently let down into the place designed for it, amidst vociferous and enthusiastic cheering of the whole assemblage, the applause breaking forth again and again, and being renewed with increased heartiness and intensity for many minutes. The guns and the bells gave out their acclamations with deafening clangour; the bands swelled into a continuous note of triumph, and mingling with the exultant roar of the joyous multitude, proclaimed in Titanic accents that the momentous event of the day was at last consummated.

The various lodges, clubs, and bodies, of which the procession was com-

Here, where are artillery-men conversant with the use of them, and the coast-guard *close* at hand to help? And why, too, should there not be a life-boat *stationed here*, as at most of our other ports?

We must ask, also, why it was that the only survivor of the crew was not *examined*, nor was even present, at the coroner's inquest held upon the bodies? *Is this legal?* The only chance the public have of discovering the truth in *case of* shipwreck, is from a searching inquiry instituted by the coroner, and *this case*, the only man who could give testimony was absent in London.

Our last question shall be, how came the vessel in this situation? with a fair wind, and an excellent light at the Cork Ledge, how should a ship not run safely into port?

It is difficult to gather the truth from the incoherent statements of the only survivor, but everything forces upon us the conviction that this ill-fated vessel has fallen a victim to the *mis*-leading lights of Harwich harbour. Since the growing out of Landguard Beach Point (owing chiefly to the excavating the cement stone, by the Ordnance, from the foot of Beacon Cliff), it is well known that the two lights in one no longer lead into the harbour, but will run a vessel on the beach. The columns of the *Essex Standard* will testify that this dangerous state of the harbour has, more than two years since, and repeatedly, been represented to the Government by the Admiralty surveyor stationed on this coast; the Trinity Board have acknowledged it, by issuing a printed notice, to warn mariners that the high light must be kept open to the southward of the low light; but what avails this to the foreigner or the stranger? Who, except those immediately connected with a place, reads a Trinity notice? Three years have now elapsed since this evil was pointed out, and even a remedy suggested; yet no remedy has been applied. What can be the reason of such extraordinary apathy? Is it that the light dues will not cover the expense of a small dark red light on Landguard Beach Point, which could not exceed £100 a-year? Our readers will scarcely believe us, when we tell them that the *nett revenue* derived from the Harwich lights exceed £13,000 a-year! yet such is the case by the last Parliamentary return to which we have had access, namely, that for 1841.

We are far from complaining of this revenue; on the contrary, we think it just and right; we know full well that no corporate body in England is so liberal, so generous, or so charitable, as the Corporation of the Trinity: but, in pity to our poor sailors who pass along the Eastern Coast of England, the most frequented thoroughfare in the world; in common justice to those who daily expose their lives, that we may lie quietly in our beds, we do ask for the paltry sum of £100 in order to place a small red light on Landguard Beach Point and we implore that it may be done at once, before the long, dark, and dreary winter nights repeat the sad tale of the wreck of the Hero.—*Essex Standard.*

THE ACTAEON.—This steam ship belonging to the Royal Mail Company, was lost on the morning of [illegible] on the Goodwin Sands. She was rounding the North Calsar at [illegible] morning, the Foreland light and within the ship being S.S.E. The [illegible] struck on a sunken rock, supposed to be the Nage [illegible] should have been making the land there at [illegible] was [illegible] struck the vessel with the view of [illegible] known all but [illegible] about [illegible] of the men then [illegible] of [illegible] of every [illegible] [illegible] one [illegible] [illegible] [illegible]

and steered for Carthagena, from which they were about nine miles distant. They landed in safety, and were hospitably received by the authorities. There were only three passengers on board at the time of the disaster. The Actæon makes the fourth vessel lost since the establishment of the Royal Mail Steam Company, being a quarter of the number of steam ships it has afloat.

[The rock on which the Actæon struck is not the Negrillo, but one outside of it laid down on the charts as that in which H.M.S. Isis, and H.M.P. Spey struck some years ago.—Ed.]

The Great Western and Great Britain Steamers.—A meeting of the Great Western steam-ship Company has been held to empower the directors to raise additional capital, by the creation of new shares, to defray the expense already incurred, and to complete the equipment of the Great Britain for sea. The necessary power was granted, and there is every probability that the Great Britain will be able to make her first voyage in the spring. The machinery of the Great Britain was set in motion one day last week, for the purpose of trying the screw, which was found to act in every respect to the satisfaction of the engineer.

Nautical Notices.

Directions for entering Rio Grande.—The following new directions for entering the Rio Grande (Brazil,) will be found useful:—The tower or lighthouse is in lat. 33° 8′, long. 52° 10′. When you make the tower, endeavour to get it to bear N. five or six miles, then steer direct for it, but be particular to observe if a red flag be hoisted on the tower; if so, it signifies that you must approach and continue to advance, (as long as the flag is up,) direct for the tower, until you see a boat, which will be at anchor on the bar, in which a pilot will be situated, showing flags, which represent the depth of water on the bar as follows:—A blue flag over a red flag, 10 feet; a red flag over a blue flag, 10 feet 6 inches; a blue pendant over a white flag, 10 feet 10½ inches; a white flag over a blue pendant, 11 feet 3 inches; a blue pendant over a blue flag, 11 feet 7½ inches; a blue flag over a blue pendant, 12 feet; a blue pendant over a red flag, 12 feet 4½ inches; a red flag over a blue pendant, 12 feet 9 inches. Steer for the boat, guiding yourselves by a staff with a flag, which is inclined by the man in the boat as follows:—If the staff is held upright, it denotes you are steering correctly. If the staff be inclined to be port or starboard, you may luff or keep off accordingly. If the flag on the tower is hauled down you must not approach. From the tower they also throw out laurel flags, particularly in rough weather, to guide vessels keeping off, or luffing, according as the flags are shown to N. and S.

There is good anchorage six miles from the tower, which bears N. six miles distance; but, as a general rule it is best to avoid anchoring. At night, keep in 10 fathoms water, or over, and be very careful to sound frequently when your head is to shore. The soundings diminish regularly to five fathoms, which is close to the breakers. On the beach to the S. of the bar, the water decreases gradually—but to the northward, it shelves more suddenly. Pilotage inwards or outwards over the bar, 280 rees per ton. Up to the harbour, 816. Anchorage 50 rees per day per Brazilian ton. Consul's fees, 87.25. Hospital money, 1818.—*Shipping Gazette.*

Unknown Rocks.—Mr. Tinnon of the brig Middleton, of Mayport, requests us to report that on the 7th of March last, while on his passage from Buenos Ayres to Valparaiso (five days out) he discovered rocks in lat. 40° 22′ S., long. 55° 13′, as per chronometer, on which the broken water was seen for a quarter

of a mile, and are narrow north and south: they about the same distance from them when first discovered by Mr. Tinnin, who was, at the time, taking an observation of the sun. He supposes they must be the Ariel Rocks, although there is a considerable difference in the latitude and longitude. Had his observation not been accurate in every direction during the interval of his taking the latitude, it is a great chance but they would have been passed without notice.

[We give the foregoing as we find it, but have no faith in the report.]

Rockal Rocks.—Mr. Bartlett, of the brig Guide, of Hull, arrived in the river from Montreal, reports that off the small island of Rockal, lat 57° 39' N., long. 13° 31' W., there is a cluster of broken rocks, about 80 or 90 feet in length, and 30 feet in breadth: the main rock, or Rockal, bearing from the outer one W. by N. by compass, distance 5 miles. "On the 15th April, 1844, at 4 A.M., sighted Rockal, bearing N.W., ship lying N.W. by W., strong gales from the S. W. by W., clear weather: was desirous to keep my reach to the N.W.; not being able to weather Rockal, bore away to round the north end: had my mate aloft, and myself on deck, to look for breakers: suddenly I found the vessel between the outer rock and the main one at least 5 miles distant; with difficulty I cleared by hauling the ship suddenly on the starboard tack, being not more than one sea from the broken water: breaks occasionally. They are bad to discern aloft, but their locality may be seen much more readily off deck, by the colour of the water: the morning being clear was able to obtain the bearing and distance pretty correctly.

RT. BARTLETT, Brig Guide.

[We have copied the foregoing from the *Shipping Gazette* for the purpose of assuring the Master of the Guide that he was entirely in error in supposing himself at so great a distance from Rockal. If he will refer to the chart of the Banks of soundings westward of the British islands, carefully surveyed by Capt. Vidal, R.N., he will find no such rock, but instead 99 fathoms, and having referred ourselves to Capt. Vidal's large original we can safely assure him there is no indication of any such danger as that to which he alludes. There are sunken rocks to the eastward of the high one well known above water, but they are less than a mile distant from it.]

Dock Office, Nov. 9, 1844.

PORT OF LIVERPOOL.—The Trustees of the Liverpool Docks and Harbour, do hereby give notice, that, on the 10th instant, a vessel exhibiting an ordinary light was moored a little to the north-west of the River Wall now constructing at the north-end of the Docks, on the following marks and compass bearings, viz., Bootle Shore Marks N. E., nearly one mile, Rock Lighthouse N. N. W. ½ W. 1½ mile.

By Order of the Committee,
WM. LORD, *Marine Surveyor.*

Trinity House, London, November 1*st*, 1844.

NOB CHANNEL AND NORTH KNOLL BUOY, *Entrance to the Thames.*—Notice is hereby given, that in consequence of considerable changes having taken place in the positions of the Sands on the eastern side of the Nob Channel, the following alterations have been made in the buoyage thereof, viz.:—

The Nob Buoy has been moved one half mile to the eastward of its former position, and now lies in 3¼ fathoms at low water spring tides, with the following marks and compass bearings, viz.:—

North Down Tower, in line with Margate Windmills . S.S.E. ½ E.

Monckton and Pan Sand Beacons in one	S. ¼ E.
Girdler Buoy	S.S.W. ¼ W.
Shivering Sand Buoy	S.W.
East Oaze Buoy	W.b.N. ½ N.

The North Nob.—A buoy striped red and white, has been placed on the western part of a knoll east of the Oaze Sand, called the North Nob, in 3½ fathoms, with

North Down Tower midway between Margate New Church and Margate Windmills, bearing	S.S.E. ¼ E.
Ash Church midway between George's Farm House and Reculvers Towers	S. ¼ E.
Mouse Light Vessel	N.W.b.W. ¼ W.
East Oaze Buoy	West
Shivering Sand Buoy	South
Nob Buoy	S.E. ½ E.

Notice is hereby further given, that the North Knoll Buoy has been taken away, and will be discontinued.

By Order, J. HERBERT, *Secretary.*

Trinity House, London, October 30th, 1844.

CHESTER BAR.—This Corporation having caused a buoy to be placed upon the north-east projection of the Sand, called the "Middle Patch," near Chester Bar, notice thereof is hereby given, and the following particulars made public, viz.:—

The buoy is coloured black and white, in circular stripes, and lies in 2 fathoms at Low water spring tides, with the following marks and Compass bearings, that is to say,—

Summer House on St. Elmo's Hill, just opening west of a tall chimney near Prestatyn, and bearing	S. b. E. ¼ E.
The most remarkable fall in the land to the westward of Rhyl, about a cable's length open west of the hotel at that place, and bearing	S. W. ¼ W.
Voel Nant Old Telegraph	S. ¼ E.
Centre of the Town of Rhyl	S.W.
Great Orme's Head	W. b. N. ½ N.
North West Patch Buoy	W. b. N. ¼ N.
Chester Bar Buoy	N.N.W. ¼ W.

By Order, J. HERBERT, *Secretary.*

Trinity House, London, November 20th, 1844.

OLD CUDD CHANNEL, *off Ramsgate.*—The intended alteration of the buoyage of the Old Cudd Channel, of which notice was given on the 4th ult., having now been carried into effect,—masters of vessels, pilots, and other persons, are to observe, that the Fairway buoy has been taken away, and that buoys are now placed on the Dike Spit and Quern Ridge, in the depths of water, and with the marks and Compass bearings hereunder stated, viz.:—

The Dike buoy (black) lies in 7 feet at Low water spring tides, on the S.W. extreme of that spit, with

The North Foreland Light House, on with a break in the cliff between Dumpton Stairs and Broadstairs	N.N.E.
Ramsgate Church, touching the west end of Wellington Crescent	N.W. ¼ N.
Ramsgate Pier Light House on the north side of the first house to the westward of the Royal Crescent	W.N.W.

The Quern buoy (white) lies in 7 feet at Low water spring tides, in the N.E. edge of that ridge, with

Ramsgate Church on with Albion House	N.N.W, ½ W.
Ramsgate Pier Light House in the opening between the Royal Kent Baths and the Royal Crescent	N.W. b. W.
North Foreland Light House	N.N.E. northerly.
Dike Buoy	N. b. E. ½ E.

Note.—The width of the Channel between these buoys is less than a cable's length.

By Order, J. HERBERT, *Secretary.*

Trinity House, London, November 16th, 1844.

BUNT HEAD, *in the Gull Stream.*—Notice is hereby given, that a buoy coloured black and white in circular stripes, and marked "Bunt Head," has been placed on an elbow of that Sand which projects into the Gull Stream considerably beyond the line of the Fork buoy and Gull Light vessel.

The said buoy lies in 4 fathoms at Low water spring tides, and with the following marks and Compass bearings, viz. :—

Thanet Windmill in line with Ramsgate East Pier Head	N. ¾ W.
Waldershare Monument in line with the south end of a new terrace of houses north of Deal	W. ¾ S.
Gull Light vessel	N.E. ½ N.
North Foreland Light House	N. by E.
Middle Brake buoy	N. by W. ¾ W.
South Brake buoy	West
Fork buoy	S.S.W. ½ W.

By Order, J. HERBERT, *Secretary.*

Hydrographic Office, November 27th, 1844.

LIGHTS ON THE COAST OF CORSICA.—The French Government has announced that the following Lights have been established on the western side of the Island of Corsica :—

1. A Fixed Light on Revellata Point at the western entrance of the Gulf of Calvi, in lat. 43° 35′ 10″ N. and 8° 43′ 50″ E. of Greenwich.

The Lighthouse is 28 feet high; the light stands 290 feet above the level of the sea; and in clear weather it will be seen at the distance of 18 miles.

2. An Intermitting Light on the summit of Sanguinario Island, at the entrance of the Gulf of Ajaccio, in lat. 41° 52′ 50″ N. and lon. 8° 35′ 50″ E of Greenwich.

This light is varied every four minutes by a strong flash, which is preceded and followed by a short interval of darkness; but the light will not quite disappear within the distance of 10 miles. The Lighthouse is 52 feet high; and the light stands 321 feet above the level of the sea. It may be seen about 20 miles.

3. A Revolving Light on Cape Pertusato at the western entrance of Bonifacio Strait, in lat. 41° 22′ 10″ N. lon. 9° 11′ 20″ E. of Greenwich.

This light will revolve once every minute, but will not quite disappear within the distance of 10 miles. The Lighthouse is 52 high, and the light is 324 feet above the level of the sea. In very clear weather it may possibly be seen 27 miles.

CAPTAIN TAYLOR'S FLOATING BREAKWATER.

H.M.S. Africane, off Shoreham, Dec. 12th, 1844.

SIR.—I beg to inform you that my breakwater sections are moored off the west end of Brighton in 24 feet low water, *within* the line of bearing for

clearing the Jenny Ground Rocks, having Shoreham new church within the pier head, bearing N.W.b.N.; Kemp Town church on with middle of Brighton pier, Blachington Wind-mill on with the Turnpike-gate house, bearing N.E. ½ N., one mile from the shore.

I am, &c.,
J. N. TAYLOR, *Capt* R.N., CB.

To the Editor.

[We thank Capt. Taylor for his communication and cordially wish his plan may succeed. For our part although we may be mistaken, we have never entertained a favorable opinion of it; but whether it succeeds or not, Capt. Taylor is entitled to the thanks of his country for having made so interesting, if not important experiment. We shall be obliged to the Captain if he will from time to time report to us the progress and result of it.—ED. N.M.]

Cork, Dec. 11th, 1844.

GUANO.—Sir,—In the *Nautical Magazine* for this month, I observe that a new guano island has been discovered on the west coast of Africa, within a few miles of the far-famed island of Ichaboe. I respectfully beg leave to state, through the medium of your useful publication that I only left Ichaboe on the 8th of September last, with a cargo of guano, and that no new guano deposit had then been discovered.

I am, &c.
JAMES MCKINNON,
Master of the barque Superb, of Liverpool.

To the Editor of the Shipping Gazette.

[The information was taken from a plan of the island alluded to just published by Mr. Laurie, and with every appearance of an intention to looseness. In the first place the island itself looks very much like one, a plan of which we have just received from Sir John Marshall, being the next bay, south of Angra Pequena. And in the next, a vessel seeking it twenty miles north of this place, would be to leeward of the proper place, and would have a difficult matter to get to it, so much so, that she would lose time, and thence, possibly, the chance of a cargo. But the mystery which has attended this from the first, partakes very much of the tricks of electioneering!—ED. N.M.]

The following letter, signed by above fifty of the principal merchants of Smyrna, is a gratifying proof of the estimation in which the services of Commander Graves are held by those gentlemen, in the improvement of the hitherto dangerous navigation of the entrance to their port. We congratulate him on the success of his labours, and have much pleasure in placing it on record in our pages.

Smyrna, Sept. 18th, 1844.

Sir.—We, the undersigned merchants, cannot allow you to leave this station on your return to England, without expressing to you the high sense we entertain of your valuable services in the surveys of the coasts and harbours of this country, so ably conducted by you during a number of years; and without conveying to you our thanks for the ready assistance you have invariably afforded to the British interests in this country, on all occasions of your services being required.

Amongst other services rendered by you, we beg particularly to mention the buoys laid down by you in this gulf, of the importance and utility of which, we cannot give stronger evidence than by stating the fact, that since these buoys were laid down, there has not been an instance of a vessel having got on shore

in this gulf, whilst, previously, it was an event of very frequent occurrence, always causing detention, expense, and, on many occasions, serious loss.

With our best wishes for your happiness and prosperity, and trusting that your arduous labours, and meritorious services will be as justly appreciated at home as they are by us, we remain with great respect,

Yours, &c.

To Commander Thomas Graves,
H.M.S. Beacon, Smyrna.

Wrecks of British Shipping.

cs crew saved—d drowned.—Continued from last Vol. page 790.

VESSELS NAMES.		BETONG TO.	MASTER,	FROM.	TO.	WRECKD.	WHEN.
Acteon	1	R. M. St.Co.	Packet	———	———	Carthagena	Oct. 21, cs
Autumn		———	Lincoln	———	———	foundered	Nov. 19, cs
Brilliant		———	———	Calcutta	Bombay	Sanger Snds	Oct. 16, cs
British settlers		———	———	———	———	Kowie bar	Sept. 23, cs
Bytown	5	———	Pye	Liverpool	Mirmichi	Magdalen I.	Nov. 8, 16s
Catherine		———	———	———	———	St. Lawrence	Nov.
Cato		Plymouth	Benson	Quebec	abandoned	foundered	Nov, cs
Ceylon		———	Ferguson	London	Bombay	Lanidares	Nov. 1, cs
Clarence	10	Sydney	McCardell	whaler	———	Chesterfield	June 9, cs
Cornelia		Wick	Small	———	Wick	foundered	Nov. 8, cs
Cyrus		———	Rae	———	———	St. Lawrence	Nov
Ellen & Mary		Cork	———	———	———	Ardmore	Nov. 14, 6d
Fanny Peat		Maryport	Welsh	Liverpool	———	Skervish R.	Nov. 15, cs
Fortuna	15	S. Shields	Ryles	Shields	———	Barnard S.	Dec. 9, cs
Gondolier		Liverpool	———	———	———	China Sea	uncertain
Hero		London	Smith	London	Amsterdam	Harwich	Dec. 8,
Highlander		———	Jacques	Lukes	near	Port Stanley	14, all lost
Jane		———	Watt	Newcastle	———	E. Swin	Dec. 4, cs
Jewess	20	Tucket	wreck	drifted	at Pubnica	Point	Nov. 25,
John & Mary		wreck	sold	at Quebec	for 738	St. Lawrence	Nov. 14,
Leo		Wexford	Murphy	Quebec	———	Belleisle	Oct. 19, cs
Mary Dugdale		———	———	St. JagoCuba	Swansea	Cuba	Oct. 14, cs
Pearl		———	———	———	Nova Scotia	Salt Key	Oct. 18, cs
Quaino	25	Greenock	Anderson	———	Ichaboe	Dunmann B.	Nov. 17, cs
S. Mumgo		Glasgow	Lamont	Calcutta	Newcastle	C. Lagulhas	Sept. 20'cs
Spray		Yarmouth	Halley	———	———	abandoned	Oct. 1, cs
Thomas		Sunderland	Price	———	———	Hay Sound	Nov. 17, cs
Three Sisters		Larne	Arthurs	Killyleagh	Whitehaven	foundered	Nov. 11, cs
Victoria	29	———	Gill	———	———	Skerrys	Nov. 27, cs

Lighthouses on the Goodwin.—(Extract of a letter.)—Mr. Bush has at length established in his caisson upwards of 20 feet of the iron shaft, or column, on the summit of which, the lighthouse will be placed. It is now above high-water mark, and there is nothing to prevent its being finished, and ready to be illuminated by the first of January next. This shaft penetrates through the various iron chambers of the caisson, and is firmly sustained in its perpendicular position by two iron plumber blocks of great strength. It is also further secured by iron stays or braces, which are bolted to the outer part of the caisson, and attached to the top, as well as the centre of the column. The new light will have an elevation of 33 feet above high water mark, and the lighthouse will be approached by a light iron spiral stair, which winds round the exterior of the column, and is an octagon of about ten feet in diameter, surmounted by a plate-glass lantern. The colour of the light is to be a pale blue, which will distinguish it from any other in the locality of the Goodwin. The caisson, which is 30 feet in diameter, has remained undis-

turbed in the same position in which it was sunk, when the untoward accident occurred, of the American barque being driven against it, shortly after Mr. Bush had partially fixed it, which completely frustrated his original plan of making the superstructure of solid masonry. The caisson is, however, to be filled up with blocks of stone and concrete; and the naval authorities of Deal have reported to the Admiralty that they expect mainland will be formed, the caisson forming a nucleus for accomplishing this most desirable object.—[We take the foregoing from the *Naval and Military Gazette* without vouching for its accuracy.—Ed.]

The Guano Trade.—Extract of a letter dated Ichaboe-roads, September 11:—"I am sorry to say that I found everything here in a sad state of confusion, and the roads full of vessels, to the number of 180 to 200. Sir John Marshall, of her Majesty's ship *Isis*, arrived here on the 8th, to adjust differences. He has had the island re-measured according to the plan sent in to him by the ship-masters, and restored something like order; for, until he came, no respectable man could land without being pelted and hooted by the labourers. The climate is healthy, but very unpleasant and parching when the wind is from the coast, and the dews and fogs are very heavy, with sometimes heavy rain for about four hours. Owing to the heavy surf and strong southerly winds, we cannot calculate upon more than three boating days per week for cargo, so that I anticipate a stay here of at least three months. I have ascertained from parties who have landed on Possession Island, that guano may be procured there, but it is very bad. That got at Angra Pequena is also very bad, so much so that they throw it out when they come here, and load this. Mercury Island is clear, and that got at the Hollams Bird Island is of very good quality, but very bad to be got off, on account of the surf running so far out. I should not by any means recommend chartering any more vessels for Ichaboe: from calculation there is only 112,000 tons of guano upon the island, and there is now in the roads 98,000 tons of shipping.—*Shipping Gazette.*

Monthly Record of Naval Movements.

America, 50, Capt. Hon. J. Gordon, 2nd Sept. left Rio for M. Video.—*Agincourt*, 72, Capt. Bruce, (flag R. A. Sir T. Cochrane.) 1st Aug. at Hong Kong.—*Alban*, st. v. Lieut. Lowe. 15th Nov. arr. Plymouth, 25th Nov. left for Cork.—*Amazon*, commissioned 15th Nov.—*Apollo*, Com. M'Lean. arr. Gibraltar 11th Nov., 2nd Dec. arr. at Malta, 5th, sailed for Corfu.—*Albatros*, 16, Com. Yorke, 20th Sept. arr. at S. Leone,—*Albion*, 90, Capt. Lockyer, left Lisbon for England, 16th Dec. arr. at Plymouth—*Aigle*, 24, Capt. Rt. Hon. Lord C. E. Paget, 26th Nov. arr. at Malta.—*Actæon*, 26, commissioned at Devonport.—*Acorn*, 16, commissioned at Devonport 18th Dec.—*Bittern*, 16, Com. E. Peel, 13th Sept. arr. at Simons bay, remained 20th Oct.

Champion, 18, Com. Clavell, 28th Nov. paid off at Portsmouth.—*Caledonia*, 120, Capt. Milne, 24th Nov. arr. at Plymouth from exper. cruize, rehoisted flag of Adm. Sir D. Milne 25th, 29th towed into harbour—*Cleopatra*, 26, 25th Sept. Simons bay.—*Conway*, 26, Capt. Kelly, 5th Sept., Algoa bay from Cape.—*Comet*, st. v., Lieut. Prettyman, 30th Nov. arr. at Plymouth, 2nd Dec. arr. at Portsmouth.—*Cambrian*, Com. Chads, 23rd Oct. left Bombay for Ceylon and Madras.—*Cruizer*, Com. Fanshawe, 6th Dec. arr. at Plymouth.—*Columbia*, st. v., Capt. F. W. Owen. 30th Nov. left St. John for Campo Bello.—*Comus*, 18, commissioned at Chatham 18th Dec.

Dædalus, 20, Capt. P. M'Quhae, 27th Nov. left Woolwich, 4th Oct. arr. at Plymouth, 15th Dec. sailed for Cape and India.—*Daring*, Com. Matson, 6th Dec. arr. at Plymouth—*Driver*, st.v. Com. Hayes, 16th Sept. arr. at Trincomalee from Bombay, 19th sailed for Singapore.

Eurydice, 26, Capt. Elliot, 3rd Nov. left Halifax for Antigua—*Espoir*, 10 Com. Morell, 29th Sept. on way to St. Helena from Ascension, captured Spanish vessel *Nase*, 7th Oct. at Ascension.—*Espiegle*, Com. Thompson, 6th Dec. arr. Plymouth.—*Electra*, Com. Darley, 6th Nov. arr. Antigua.—*Espoir*, Lieut. Com. C. Hadaway, 10th Oct. left Ascension for St. Helena, having left Com. Morell at Ascension as Commander.

Flamer. st.v., Lieut. Postle, 17th Nov. left Plymouth for Mediterranean.—*Flying Fish*, Com. Harris, 6th Dec. arr. at Plymouth.—*Firebrand*, st.v. Capt. Corry, Dec. 6th, arr. Plymouth.—*Ferret*, 6, Com. Oake, 28th Sept. captured a schooner with 400 slaves.—*Fox*, 42, Capt. Sir H. Blackwood, 25th Sept., arr. Simons Bay; 4th Oct. sailed for Ceylon.—*Fantome*, 18, commissioned at Chatham 18th Dec.

Griffon, 3, Lieut. Jenkins, Nov. 20th, arr. Sheerness; 28th paid off.

Hyacinth, 18, Com. Scott, 19th Oct. arr. Barbados; 23rd at Bermuda—*Hornet*, 3, Lieut. Seavers, 27th Nov. arr. at Spithead from Bermuda; 29th sailed for Chatham; 3rd Dec. arr., 7th paid off—*Hyacinth*, Aug. 25, at Singapore—*Hecla*, st.v. Com. Duffill, 10, Nov. arr. Malta—*Hazard*, 18, Com. Bell, 4th July left Sydney for Auckland, N.Z,—*Heroine*, 6, Lieut. Foote, 8th Oct. at Gallinas.

Inconstant, 36, Capt. Freemantle, 2nd Nov. arr. Port Royal—*Illustrious*, flag of Adm. Sir C. Adam, arr. 23rd Nov. Bermuda—*Isis*, Capt. Sir John Marshall arr. 3rd Oct. at Ichaboe.

Lucifer, st. v., 20th Nov. arr. Cork.—*Lily*, 16, commissioned at Portsmouth.

Modeste, 18, Com. Baillie, left Sandwich Islands for the Columbia river.

Nimrod, 20, Com. Glasse, 22nd Nov. paid off at Plymouth.

Osprey, Com. Paten, 6th Dec. arr. at Plymouth.

Pelican, 16, Com. Justice, 3rd Aug. arr. at Hong Kong, 3rd sailed for England—*Pique*, 36, Capt. Hon. M. Stopford, 3rd Nov. left Halifax for Barbados—*Pickle*, Lieut. Bainbridge, left Jamaica for Honduras 17th Oct.—*Pantaloon*, 16, Com. Wilson, 6th Dec. arr. Plymouth—*Pilot*, 16, Com. Jervis, 30th Sept. arr. Calcutta from Moulmien—*Persian*, 16, commissioned at Devonport 19th Dec.—*Plomet* Freight-ship, Dec. 17, left Deptford for Jamaica.

Queen, 1st Dec. flag of Vice-Adm. Sir J. C. White hoisted, 5th moved into harbour, Sheerness.

Resistance, Com. Patey, 21st Nov. arr. Cork; Dec. 1, sailed for Malta with 72nd regt.—*Rhadamanthus*, st.v, 27th Nov. left Dublin with 16th regt.; 6th arr. Cork—*Rattler*, st.v. Com. H. V. Smith, commissioned at Woolwich—*Raven*, cutter, 13th Dec. paid off at Sheerness—*Racehorse*, 18, commissioned at Devonport—*Ranger*, 6, commissioned at Devonport—*Rose*, 16, Com. Sturt, 7th Nov. at Tampico—*Rosalind*, about 15th June, arr. at Aimeo from Valparaiso.

Scylla, 16, Com. Sharp, 27th Oct. left Halifax for Port Royal—*Satellite*, 18, Com, Rowley, arr. M. Video from Rio, 30th July—*Skylark*, Lieut. Morris, 16, arr. Sheerness; 13th Dec. paid off—*St. Vincent*, 120, Capt. Lord Hardwicke, 26th Nov. arr. Portsmouth from experimental cruize; 28th re-hoisted Admiral's flag—*Savage*, 10, Lieut. Bowker, 16th Nov. at Gibraltar—*Scout*, Com. Hon. J. R. Drummond, 16th Nov. Gibraltar—*Sappho*, 16, Aug. 26th in Mozambique Ch—*Superb*, 30, 11th Dec. commissioned at Devonport by Capt. A. L. Corry—*Siren*, 16, Com. Smith, 12th Dec. arr. Spithead, 11th Sept. left Trincomalee, 19th Oct. Cape, 30th Oct. St Helena, 4th Nov. Ascension—*Savage*, 12th Dec. arr. Plymouth—*Serpent*, 16, Com. Neville, 1st Nov. arr. at Bombay—*Samarang*, Capt. Sir E. Belcher, 25th Aug. arr. at Sincapore from Borneo—*Spartan*, Capt. Hon. C. Elliot, 2nd Nov. arr. Vera Cruz—*Siren*, 16, Capt. Smith, from Trincomalee, arr. Portsmouth—*Sealark*, 10, Com. Gooch, 12th Oct. at Ascension.

Thunderbolt, st. v. Com. Broke, 15th Sept. arr. Simons bay—*Thunder*, sur. v. Com. E. Barnett, 24th Oct. arr. Nore, 26th sailed for W. Indies—*Tartarus*, Com. Wolfe, 3rd Nov. left Cork, 23rd arr. at Plymouth, 17th Dec., sailed for

Cork—*Tortoise*, 21st Oct. arr, Ascension—*Thalia*, 46, Capt. Hope, 25th June left Tahiti for Sandwich Islands, to sail from Sandwich Islands on 20th July with Major-Gen. Miller for Tahiti.

Volcano, st. v., Lieut. Miller, 3rd Dec. left Portsmouth for Malta—*Vixen* st. v., Commissioner Gifford, 7th Sept arr. Sincapore—*Vestal*, 26, Capt. Talbot, 19th Sept. left Simons bay for N. S. W. and Hong Kong.

Wolverine, 16, Com. Morris, 2nd Aug. left Hong Kong, 4th Sept. arr. at Sincapore—*Wasp*, 16, Com. Usher, 25th Sept. arr. at S. Leone—*Waterwitch*, Com. Birch, 6th Dec. arr. Plymouth—*Winchester*, 25th Sept. arr. in Simons bay.

ROYAL YACHT SQUADRON.

Ariadne, Capt. Ponsonby, left Gibraltar 7th Dec. for Malta.

PROMOTIONS AND APPOINTMENTS.

[From the Naval and Military Gazette.]

PROMOTIONS.

RETIRED COMMANDERS—J. M'Dougall and F. J. Leroux, from Retired List of 1830, to Retired List of 1816.

CAPTAIN—C. G. Wellesley, H. Sturt.

COMMANDERS—A. Farquar, J. Clavel, R. Jones, W. Robinson, J. T. Caldwell, T. J. Cochrane, E. Codd.

LIEUTENANTS—F. Forbes, G. Sprig, J. Punn, A. O. Hansard, H. A. Kerr, H. D. Blanckley, E. P. Fuge, R. H. Risk C. T. Dench, F. Martin, R. Patey, W. A. Munton, Willes, W. J. A. Heath, R W. Courtnay.

APPOINTMENTS.

CAPTAINS—A. L. Corry to *Superb*—J. Hope (1842) to *Firebrand*—G. Mansel to *Actæon*.

COMMANDERS—G. Hay to *Racehorse*—T. S. Thompson (1832) to *Comus*—H. Coryton (1841) to *Persian*—J. Bingham (1841) to *Acorn*—C. J. Newton (1841) to *Lily*—Sir F. W. Nicholson (1841) to *Fantome*—J. Anderson (1841) to *Ranger*—G. S. Hand (1841) to *Espoir*—W. K. Stephens (1840) to *Superb*—G. Davis to *Wolf*—R. W. Pelly (1814) to *Rose*—H. Smith (1841) to *Rattler*—H. C. Otter re-appointed to *Sparrow*.

LIEUTENANTS—R. Maguire (1840) to *Agincourt*—T. H. Downes (1844) to *Amazon*—G. Western (1837) to *Firefly*—F. Smyth, J. J. Wilkinson, and J. Davies to be Mail Agents—H. W. Hire to *Hecla*—W. Critchell to *Bonetta*—H. H. J Giles to *Tartarus*—A. G. Edye to *Caledonia*—P. Shorthand (1842) to command *Columbia*—W. Fellowes, A. West, C. Bullen, J W. Fairholme to *Superb*—H. Eden (1837), W. P. Johnson (1842) to *Eagle*—G. B. Williams (1840) to *Waterwitch*—J. C. Thompson (1841), R. Alcock, R. Patey, C. S. Dench, C. D. O'Brian, A. Barrow, H. Lloyd, R. W. Courtenay, C. Pechell, R. Risk, and W. Munton to *Caledonia*—R. Edwards and T. C. Meheux to *Tartarus*.

MASTERS—W. Green to *Rattler*, J.W. Armstrong to be Registrar of seamen—J. T. Forster to *Actæon*—J. G. Noss to *Racehorse*—T. Goss to *Acorn*—J. W. Wilkins to *Lily*—A. Mackey to *Superb*.

SECOND MASTERS.—W. P. Braund to *Superb*—A. L. Halloran, acting master of *Ranger*.

MATES—F. R. Hawkins, G. O. Willes, and W. B. De Blaquier, to *Eagle*—W. H. Phipps to *St. Vincent*.

MIDSHIPMEN—H. Claverty to *St. Vincent*—J. M'Donald to *Amazon*—W. J. Bridges to *Actæon*—T. Saumarez to *Racer*

SURGEONS—H. Henning to be surgeon and medical storekeeper at Malta Hospital—E. Caldwell to *Ceylon*.

ASSISTANT SURGEONS—J. L. Donnett to Greenwich Hospital—R. C. Russell to the Naval Hospital, Stonehouse—J. Collings to *Agincourt*—J. Whitmarsh to be dispenser at Greenwich Hospital.

PAYMASTERS AND PURSERS—G. Thorn to *Superb*—J. R. Tate to *Rattler*—W. H. Dutten to *Hecate*, H. H. Chimmo to *Lily*—John Forster to *Racehorse*—J. S. Pope to *Actæon*—W. Weaver to *Cruizer*—E. Ward to *Acorn*—R. Ridley to *Ranger*.

CHAPLAINS—Rev. W. G. Tucker to *Ceylon*, for service at Malta—J. A. Burrough to *Amazon*.

COAST GUARD.

Removals—Lieut. C. A. Thorndike, R.N. to Littlehampton—Mr. R. C. O'Brien to Claggan—Mr. W. Townsend to be inspecting officer at Whitehorse.

BIRTHS.

Dec. 6, at Devonport, the lady of Lieutenant Atkinson, R.N., of a son.

Dec. 13, at Merrow, the lady of Capt. Parke, R.M., of a daughter.

Dec. 15, at Southsea, the lady of F. Liardet, Esq., Capt. R.N., of a daughter.

Dec. 17, at Spike Island, Cork, the lady of Lieut.-col. Burton, R.M., of a daughter

Dec. 5, the lady of Lieut. Blackmore, of a son.

MARRIAGES.

Dec. 3, at Trowse, Norwich, W. Webster, Jun. Esq. to Elizabeth, eldest daughter of Lieut. R. B. Mathews, R.N.

Dec. 12, at Burnham, Norfolk, H. Girdlestone, Esq., of Hanley, Staffordshire, great nephew of the late Viscount Nelson, to Ellen Catherine, youngest daughter of the late Sir W. Hilton, Capt. R.N.

DEATHS.

Oct. 23, at John's N.B. J. Caillip, Esq., Lieut. R.N. aged 51.

Dec. 14, at Reading, Capt. T. Gilbert R.M. H.P. father of the Bishop of Chichester, aged 86 years.

Nov. 23, Elizabeth, daughter of Capt. Pridham, R.N. aged 33.

Dec. 2, at Bognor, Sir Isaac Wilson, M.D. and F.R.S., for many years Physician to the Royal Naval Hospitals at Plymouth and Haslar, and Domestic Physician to the Duke and Duchess of Kent, aged 88 years.

METEOROLOGICAL REGISTER.

Kept at Croom's Hill, Greenwich, by Mr. W. Rogerson, of the Royal Observatory.
From the 21st November to the 20th December, 1844.

Month Day.	Week Day	Barometer.		Fahrenheit Thermometer, In the Shade.				Wind.				Weather.	
								Quarter.		Strength			
		9 A.M.	3 P.M.	9 A.M.	3 P.M.	Min	Max	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.
		In Dec.	In Dec.	°	°	°	°						
21	Th.	30·30	30·34	38	41	37	42	SW	SW	1	1	f	f
22	F.	30·23	30·19	36	42	32	43	SW	NE	1	1	of	o
23	S.	30·15	30·15	40	43	38	44	SE	NE	1	1	o	o
24	Su	30·06	30·00	37	40	34	41	NE	NE	1	1	o	o
25	M.	30·00	30·02	38	42	35	43	NW	NW	1	1	o	o
26	T.	30·25	30·29	33	40	32	41	SW	SW	1	1	b	b
27	W	30·33	30·28	29	39	27	40	S	S	2	1	b	bc
28	T h	30·10	30·04	34	41	29	42	SE	S	2	2	bc	o
29	F.	30·00	30·00	38	39	37	40	E	E	1	1	bc	o
30	S.	30·10	30·08	37	37	36	39	N	N	1	2	o	bc
1	Su.	30·14	30·14	36	39	32	40	NE	N	1	1	o	bc
2	M.	30·07	30·00	36	37	34	38	N	NE	2	2	o	o
3	Tu.	30·04	30·04	35	37	32	38	NE	NE	2	2	o	o
4	W.	30·22	30·20	35	36	33	37	NE	NE	3	2	o	bc
5	Th	30·11	30·04	26	32	24	34	N	E	1	1	b	b
6	F.	30·20	30·20	22	28	20	30	N	NE	1	1	b	b
7	S.	30·25	30·27	29	31	20	32	E	E	3	3	o	o
8	Su.	30·16	30·08	29	29	24	31	E	NE	3	4	bc	ops (4)
9	M.	30·07	30·09	27	29	26	30	NE	NE	2	4	o	o
10	T.	30·10	30·06	31	30	29	31	NE	NE	3	3	o	o
11	W.	29·96	29·92	29	29	28	30	N	NE	1	1	o	o
12	Th.	29·94	29·84	27	29	23	30	E	E	1	3	o	o
13	F.	29·58	29·48	26	25	23	27	E	E	5	5	qo	qo
14	S.	29·40	29·46	27	30	25	31	E	E	1	1	o	os (4
15	Su.	29·56	29·50	33	36	29	37	NE	E	1	2	o	o
16	M.	29·30	29·28	36	37	33	38	E	NE	2	1	o	ofd (3
17	Tu	29·38	29·42	36	40	35	42	SE	E	1	1	of	of
18	W.	29·60	29·66	39	42	37	43	E	NE	1	1	ofd (2)	of
19	Th	30·06	30·12	40	40	39	41	NE	NE	3	3	od (1) (2)	bc
20	F.	30·29	30·27	34	32	30	34	NE	NE	5	5	qbcv	qbv

NOVEMBER, 1844.—Mean height of the Barometer=29·782 inches; Mean temperature =43·3 degrees; depth of rain fallen 4·70 inches.

TO OUR FRIENDS AND CORRESPONDENTS.

The important communication of the HARBOUR MASTER AT MADRAS, has duly reached us, and shall appear in our next.

We thank our old and esteemed correspondent for the extracts concerning the POLYNESIA, and shall locate them with the above. The proceedings on the FORMIDABLE, also Mr. WATSON'S communication shall shortly appear. The plan of SUFFRANNA, having been badly engraved, is postponed until next number.

We have the satisfaction of informing our readers that we are promised some ...TIONS FROM THE ANCIENT HISTORICAL RECORDS OF THE BRITISH NAVY," to ...ated by *John Barrow, Esq.*, Keeper of the Records of the Admiralty, ... Life of Sir Francis Drake, &c.

Ships burnt at Sea, and in Harbour, *and Remedial Suggestions on the first symptoms of danger by fire.*

Madras, September 21st, 1844.

Mr. Editor.—The lamentable and destructive results of fire on board ship within the last ten or twelve years, and the recent providential escape of the Larkins, in the roadstead of Madras, induce me to call attention to so serious and important a subject, and to suggest a plain and feasible method of discovering the very first indication of fire, whereby, under the blessing of Divine Providence, the dread crisis may be avoided or overcome.

For the purpose of illustrating questions of such vast importance, bearing as they do on the welfare and preservation of the Merchant Service, I have in the subjoined statement exhibited a list of ships and vessels burnt at sea and in harbour, within the last twelve years; this statement is drawn up from well authenticated reports which I have occasionally noted down, but I am afraid a more rigid scrutiny into the record of Naval events would swell the catalogue; and when we take into consideration the number of missing ships which must have perished with all their crews, we may reasonably conclude that some on that melancholy list were burnt. I have also enumerated a few remarkable escapes after the outbreak of fire, but no narrative can better exemplify the successful issue of manly fortitude and skill, and resolution in a case of extreme peril, than the following very extraordinary case, which is attested by Mr. Clarke, a constable attached to the Police Office at this presidency, whose services on board the Larkins when that vessel was on fire, and upon other occasions under my superintendence, have proved that he is a thorough seaman, zealous in the discharge of every duty, and a man that can always be depended upon.

Clarke was a youngster on board the Perseverance some fifteen years ago, when that ship about 300 tons, and then under the command of Capt. Thompson, had taken in at New York a cargo of cotton for the Liverpool market. Two days after she left port and during a fresh gale from the westward, smoke was observed issuing through every crevice around the hatchways, and from the ship's sides within. Increasing heat became likewise presently apparent, and it was too soon manifest to all on board that the cotton had extensively ignited. At this awful crisis the firmness and foresight of Captain Thompson did not desert him. Mindful of his vast responsibilities, and conscious of the magnitude and imminency of the dangers which beset his vessel and her crew, he at once prepared to encounter them by a resolute employment of the only means available. Perceiving that to regain New York or make any other American port, in the teeth of such a gale as then drove him from the New World, would be impossible if attempted, he promptly battened down the hatches, with tarpaulins over all, put pumps and buckets in requisition for the purpose of flooding the upper deck, (which operation was continued throughout the entire voyage,) and made all sail across the Atlantic. The younger portion of his crew did all in their power to prevail upon him to take off the hatches, and commence casting overboard the cargo. Captain Thompson however firmly resisted their proposal, assuring them of the fatal con-

sentences which must flow from the acquaintance with [illegible]. Still as the Perseverance advanced on her perilous voyage, the slow internal fire gathered strength. The decks and sides of the vessel grew intensely hot, and at length the pitch became molten, and her seams opened. To conceive what must have been the feelings of those on board during this terrible period would be difficult—to describe them impossible. Most providentially, however the western gale maintained, and after a quick run, for the day which he more than the anxieties and apprehensions of a life time had, as it were been condensed, the noble fortitude of the brave hearted commander was recompensed, and the apparently devoted vessel reached her destined port. On entering the Mersey, Captain Thompson ran the Perseverance immediately on shore, and breaking bulk, discovered how great had been the danger incurred, how marvellous the escape vouchsafed to himself and to his fellow-voyagers. Beams, timbers, ceiling, nay, the very mast themselves, were almost completely charred or rent by the long continued and wide spreading action of the fire. The main-mast in particular, from the partners to the kelson, had suffered so severely, that it could not, unless by a miracle, have held out save for a very little time longer. In short, the entire hull of the vessel was seen to be so seriously injured, that her immediate condemnation became unavoidable.

The Perseverance on this occasion had been fully laden to her upper deck, and the burning mass within her, during a chief portion of the voyage, must, therefore, have occupied a space frightful to contemplate. Reviewing this circumstance, the absolute necessity under which she lay to cross the wide Atlantic, the perilous efforts of many on board to divert her commander from his wise plan of smothering the flames by close hatches, and the more than half-consumed state in which she reached Liverpool, we cannot but esteem the preservation of her crew, as among the most remarkable of those beneficent dispensations of Providence, which illuminate the dark page of human history. A change of wind in mid passage, or still more the happening of a calm, would have brought the most terrible of all fates upon Captain Thompson and his associates.

The loss of the extra laden ships, Earl of Eldon, and the James Pattison, presents the most eventful cases for consideration: those vessels were staunch and strong, well found, ably commanded, and skilfully conducted. The Eldon sailed from Bombay on the 24th August, 1834, and on the 27th of September it was discovered that her cargo, *under* hatches, had ignited, and although prompt measures were resorted to, every effort failed, and in ten or twelve hours she was in flames, when all on board escaped in the ship's boats, and after a perilous voyage of more than 1,000 miles they reached the Island of Rodriguez. The James Pattison left Bombay on the 27th of June, 1840, and on the 29th of September, at 1 p.m., off the Western Islands, smoke was seen issuing up the fore hatchway, and it was found that the cargo was on fire. Every exertion, and every well devised means were in immediate operation, when by the mercy of Providence, and just at that critical moment when her worthy commander and his crew were about to commit themselves to further peril in leaky boats, a sail was discovered, and at that very time the flames had reached her rigging and masts. In that awful condition the James Pattison in a blaze, bore up towards the welcome stranger, and

has been worked out, and by the burning of their ship they would have lost their chests and clothes which are worth the other half; surely it may be asked what object could they have in view by the accomplishment of so infamous a purpose as that which they are suspected of?

Beyond those fatal explosions on board cotton laden ships, there are several on record which have been destructive to ships and steam vessels, occasioned without doubt by the spontaneous ignition of coal, hemp, wool, hay, and lime. I will briefly advert to the loss of the Madagascar steamer, and the more recent disaster which befel the Palestine. When the Madagascar was discovered to be on fire, (off the south coast of China,) it appears, by the able narrative drawn up by her commander, that there was every reason to believe that coal of a pyritous kind had ignited, and although the most prompt and energetic measures were enforced, she burnt with such rapidity that the commander, his officers and crew, were compelled to seek safety in her boats, in tempestuous weather, and a high sea, when the perils of another element left but little hope of success: three boats out of four in which the officers and crew left her, were lost, and fifty-seven souls perished; the survivors were carried into captivity, and after much, and long suffering they were released.

The Palestine,* coal-laden was pursuing her voyage to Aden, and when on the 4th of February, 1844, in lat. 26° S., long. 58° E., the issue of smoke, and other certain signs indicated that the coal was on fire. Every precaution had been taken, and the use of iron, thrusting rods for the purpose of testing the state of the cargo had been attended to, and from the moment the fatal discovery was announced, her commander set about the trying and arduous work of procuring safety by every skilful means; but all human efforts were in vain, the flames burst forth, and the ship was abandoned. The chief officer and thirteen men in the cutter, reached the the isle of France, and after a long and anxious suspense regarding the fate of the worthy captain, and his shipmates in the launch, (with twenty-one men,) we were at length gratified by learning, through the medium of the English papers, that they had been picked up by the brig Solway, and landed in health and safety at the Cape of Good Hope.

One word more about ships which have been destroyed under that sad and culpable practice of drawing off spirits below, and with a light; and if commanders, officers, and seamen, would only revert to the melancholy, and heart-rending fate of the Hibernia, emigrant-ship, which was owing to that disgraceful practice, they would imbibe a lesson which ought not to be learnt in vain. The Hibernia, having on board 232 men, women, and children, was burnt at sea, and after much misery in open boats, only 63 persons were saved, 169 having perished.

And now Mr. Editor, having recounted many a tale of woe, I will, with more heartfelt satisfaction, explain my plan and suggestions, whereby the timely warning of threatening and approaching danger by fire, may induce corresponding means of overcoming that fearful crisis which has consigned so many valuable ships, lives, and so much property to utter ruin.

The grand desideratum, (when spontaneous combustion is insidiously working its way to a spreading conflagration,) is the foreknowledge of

* An account of the destruction of this vessel appeared in our volume of last year, p. 348.—Ed.

any increase of heat in various parts, or one particular space of a ship's hold, such as would induce every search whence the greatest heat arose; and in all ships or vessels laden with cotton, hemp, or other articles of a combustible nature, and those ships are generally fully laden, I would recommend their owners and commanders to adopt the use of test or safety air tubes of wrought iron, on the following plan. There should be six tubes, each vertically fixed on the kelson, and projecting through the deck, or both decks, if laden between decks, to one foot above the deck over the cargo; the tubes may be four or six inches in diameter, opening with a safety-valve above, and having four short branches or flues at the lower end two or three feet long, two of those flues in a fore-and-aft line, the other two athwart-ships, and the same number may be attached to the column of the tube, midway between the kelson and the hold beam, and the lower flues may be fitted with valves, which would yield to a rush of water, in the event of the tubes being converted into water-pipes, and used to force water into the hold; the lower extremity of the tubes, and the ends of the flues may easily be protected by a strong iron grating, which would secure them from undue pressure, and preserve a sufficient space for the circulation of air and water. The flues, and the column of the tubes, should be perforated for the admission of air below the deck. One tube should be placed in the run or after part of the hold, opening its tell tale mouth between the after cabins; the second between the mizen-mast and the after hatchway; the third just before the main-mast; the fourth a little before the main hatchway; the fifth just abaft the fore hatchway; and the sixth a little before the fore-mast. With such a testing apparatus, and with careful attention to a daily register of the temperature which the tubes could never fail to indicate, I verily believe that timely warning would be conveyed, and the locality of danger being so correctly told, would prove an infallible guide to the approach of it; and by giving confidence as to the position where every force, and every energy should be directed, safety and security would follow, and, I really think, that had the Eldon and James Pattison been furnished with such means of ascertaining the progress of fire, they might, by timely efforts have been saved.*

With respect to coal laden vessels bound on a long voyage, I think some further precaution than the test tube is necessary, because coal stowed in bulk, and having the pyritous coal amongst it, may ignite and spread, without such a timely indication as may be necessary; I would therefore recommend that some sacrifice of space should be made in all such coal laden vessels, and by dividing the cargo into three different heaps or portions, and leaving a gangway or well between each division, room would be afforded to shift the coal and to flood any particular spot where the ignition was at work†. This plan is practicable in all laden ships as I myself adopted it when in 1816, I was chief mate of the H. C. ship

* The tubes may be vertically fixed up and down the hold stanchions, and should be strongly wrought to resist the heavy pressure of cargo, and they can be displaced, and stowed away between decks, if there is a probability of their not being required.

† The Roxburgh Castle was in such imminent danger by the spontaneous ignition of coal, of which she had about 200 tons on board, that Captain Penny scuttled the ship and bore up for this port; her escape was owing to the space available for shifting coal until the fire was reached and quenched, when she resumed her course to a, much coal was thrown overboard.

Royal George: it was then her seventh voyage, and she betrayed weakness throughout, and was leaky. We were bound to China with a very valuable cargo of woollens, therefore to obviate the ill effects of leakage through the water-way seams, and in her wings, my friend Captain Timins allowed me to adopt a plan which at that time suggested itself, viz., by keeping a space along the wings and in the run abaft the bales, whereby a person could walk along and around the wings at any time during the voyage. I had the bales stowed in a perpendicular line from the ground tier, and with planks and cleats, and stout shores. My plan succeeded, and a cargo which would otherwise have been seriously damaged was delivered in excellent order. When so much risk attends the stowage of coal in bulk, I cannot conceive why every precaution should not be used, and with three wells or trenches, or gangways, and with tubes through the centre of the coal heaps, safety may follow, where the liability of danger would otherwise be apprehended.*

But when ships are on fire, through the broaching of spirits, I cannot devise any method of safety. One or two vessels, like the Brooke off Calcutta, have escaped, and *her* safety was considered miraculous; whilst the melancholy record of disastrous consequences impelled under the influence of folly, neglect, and ignorance, presents a frighful contrast. Salutary rules and regulations, well known to all experienced seamen, have been set at nought, and ships, lives and property have, under such disgraceful conduct, been utterly destroyed and sacrificed.

The only objection which can be offered to the use of the air and safety tubes, on the plan which I have suggested, is the loss of a certain quantity of stowage. Their bulk will prove that they cannot displace much cargo,† but much or little, that question sinks into insignificance when past experience so forcibly tells the consequences which have resulted from inattention to anything like a system of care, vigilance and caution.

And now, Mr. Editor, I beg leave to disclaim the entire merit of the plan I have devised; if any merit therein is due, as a method something like mine was suggested by the Editor of the Calcutta journal "The *Englishman*," about two years ago, and which came to my notice whilst overhauling old papers, scraps, &c. a few days since. The scheme referred to was explained in an editorial article having reference to the disasters at Bombay, but it was intended to apply to coal laden vessels, and the author recommended that several sheet iron tubes should be set into the mass of coal, either vertically, horizontally, or diagonally, and that the coal should be so stowed that the mouths of those tubes should be always accessible; and he advised a daily attention and register by thermometer of the result of heat, as indicated by the tubes. And, here allow me to observe, Mr. Editor, should these united suggestions induce a better scheme, and one that can be put into practical operation with every class of vessels, and every description of cargo, the great and important object which the Editor of the *Englishman*, and every friend of

* Coal ships especially on a long voyage, can always afford space, as a full cargo would load them too deep.

† The test or air tubes may be converted into hold stanchions, and under the hold beam stout shoulders may be wrought sufficiently strong to sustain any weight, and it cannot be doubted that wrought iron cylinders can obtain any strength, by this plan the only reasonable objection to the use of tubes will be obviated, as they would occupy much less space than stanchions made of timber.

humanity must advocate, and cannot fail to uphold, will be in a hopeful train. Abler judges of the effort which should be made to remedy a serious and a national evil, can readily be found, and if *our* ideas lead to so beneficial a result, we, amongst that number who love, and wish to cherish the welfare of Old England's wooden walls, will hail the project with every feeling of pleasure and satisfaction; and our humble but zealous support will at all times, and in all places be available.

I am, &c.,

C. BIDEN,

Master Attendant.

Statement shewing a number of British Merchant vessels burnt at Sea and in Harbour from 1833 to 1844.

DATE.	SHIPS.	CARGO.	REMARKS.
1833	Schooner Reliance	Valuable cargo & specie	Burnt at Singapore, 7 lives lost.
"	Hibernia	Emigrants	Burnt at Sea, drawing off spirits with a light, 169 souls perished, 63 saved.
1834	Earl of Eldon	Cotton	Burnt at Sea, spontaneous ignition, crew saved.
1836	Premier	"	Burnt off Ascension.
"	Princess Victoria	Hemp and Sulphur	Burnt at Sea, crew saved.
"	Tyne	Cotton	Burnt in Bombay Harbour.
"	Edinburgh	Wool	Burnt at Sea, crew saved.
"	Water Lily	Combustibles	Burnt off Limerick, Capt. & men perished, one of the crew saved
837	Gregson	Jute and hemp	Burnt at Sea, crew saved.
"	James Colvin	Oil, Coal, &c.	Wilfully set on fire in the Pacific by ship's cook, who destroyed himself, rest of the crew saved
1839	Lucretia	Sundries	Burnt at Sydney drawing off spirits with a light, crew saved
"	Poland	———	Set on fire by Lightning.
"	Despatch	Wool	Burnt at Sea.
1840	James Pattison	Cotton	Burnt at Sea;—spontaneous ignition, crew saved.
"	Georgia	Sundries	Burnt at Sea.
1841	India	Emigrants	Burnt at Sea, broaching spirits with a light, 18 lives lost.
"	Madagascar	Coal	Burnt at Sea off the S. Coast of China, 3 out of 4 boats were lost, and 57 souls perished.
"	Regia	Wheat, Sulphur, Saltpetre, &c.	Burnt off Ceylon.
1842	Lady Raffles	Wool	Burnt at Sydney, crew saved.
"	Republic	Linseed	Burnt at Mauritius, crew saved
"	David Scott	Ballast	Burnt at Mauritius, drawing spirits with a light, crew saved.
"	Harriet	Saltpetre and Indigo	Burnt off Calcutta, cause unknown, 1 life lost.
"	Vansittart	Cotton	Burnt in Bombay Harbour.
"	Cornwallis	"	"
"	Adelaide	"	"

Date.	Ships.	Cargo.	Remarks.
"	Eleanor	Cotton	Burnt off Aleppee.
"	Belvidere	"	Burnt off Singapore.
"	Thomas Grenville	Cotton	Burnt in Bombay Harbour.
1843	Diana	Oil	Set on fire and blown up at St. Helena.
"	Tartar	Combustibles	Burnt at Southampton.
1844	Meg of Meldon	Hemp and Saltpetre	Burnt in dock at Liverpool.
"	Palestine	Coal	Burnt at Sea.

N.B.---H. C. Ship Earl Camden 1,200 Tons, Cotton laden, was burnt in Bombay Harbour 1810.

List of vessels which were on fire and saved by prompt and decided measures.

Date.	Ships.	Cargo.	Remarks.
1833	London	Coal and Sundries	Spontaneously ignited, saved.
"	Roxburgh Castle	Sundries with Coals	" " "
1837	Victory	Straits' Produce with Cotton	" " "
1842	Brooke	Saltpetre	Drawing off spirits, saved.
"	Hope, Lightvessel	———	On fire and saved.
1843	Oriental Steamer	Passengers	Drawing off spirits, saved.
1844	Larkins	Cotton	On fire and saved.

In the years 1833 and 1834, it appears by the evidence taken before the Select Committee on Shipwrecks that twelve ships and vessels not enumerated in the foregoing list were burnt at Sea and in Harbour, and in one year subsequent to that date 4 vessels laden with lime were burnt by spontaneous ignition.

N.B.—An instance of presence of mind and promptitude in some respects parallel to that which was displayed on board the merchant ship Perseverance, occurred on board H.M. ship Hindostan off Barcelona in 1804. She was laden with Naval stores for the Mediterranean fleet, and caught fire in the hold; every effort was made to extinguish the flames, and finding them hopeless, her gallant commander ordered the hatches *to be caulked down*, and made sail for the bay of Rosas, where the Hindostan was ran on shore, she was entirely burnt, and out of her crew amounting to 210 men, 205 were saved, 5 were lost, and H.M.S. Juno was sent to receive on board the survivors.

C. B.

[While on the subject of fire at sea, we may add the following more modern instance from the *Times* of the 17th of January.]

Spontaneous combustion of Guano.—The steam packet Waterwitch,

arriving at Hull from London on Wednesday, brought into port the master and crew of the bark Ann, Storey of Sunderland, who had been picked up by the packet in an open boat, to which they had taken on the destruction of their vessel, near Hasbro' Sand, on Tuesday evening. It appears by the statement of the shipwrecked men, that the Ann, a new bark, on the first voyage, was returning from Ichaboe, with a cargo of Guano, and unfortunately struck on the sand, and, while beating over shipped a quantity of salt water, which penetrating the cargo, caused almost instantaneous combustion. A volume of smoke rising through the fore hatchway warned the crew of this new danger, and induced their immediately taking to the boat, without saving anything but themselves; and scarcely had they done so, when a tremendous explosion of the gas engendered by the partially fired guano, blew the stern out of the vessel, which then filled and sank in deep water. It is said that three vessels belonging to the same owners, started together on this voyage, one of which was lost on the passage out, and the third had not arrived at Ichaboe, when the unfortunate Ann left the island.---*Hull Paper.*

POLYNESIAN ISLANDS.

SIR.—The following extracts from the remarks of Mr. Watkin, a very intelligent gentleman, (and others) employed in the work of redemption in the islands of the Great Ocean, or Polynesia, may prove as interesting to many of your readers as they have to me. Many of the notices might become of value to seamen, if extracts were given annually from the reports of the Missionaries, and be gratifying to the general reader as marking the progressive advancement from savage life to civilization.

Z.

To the Editor, &c.

Mr. Thomas says,—What are generally called the Friendly Islands, include not only the Tonga group, with Eua, or Middleburg, but also the Hapae or Haabai group, Haafuluhao, or the Vavau group, and Nina, or the Kebel's islands, about two hundred islands in the whole; many of which are very small, and without inhabitants; but others of them are thickly peopled. Till very lately, the inhabitants were living in the grossest idolatry; but the "Sun of righteousness has risen with healing in his wings," and many of the benighted natives of these islands "have seen a great light." The people who inhabit the above-mentioned islands, all speak the same language, and except those who have embraced Christianity, worship the same gods, or gods of the same nature and name. The other groups have acknowledged Tonga as the head, and have generally brought yearly offerings as a token of their submission.

Tonga is the largest of the islands, and contains more inhabitants than any other island in these seas. At this time it is thought to contain about ten thousand inhabitants. These are under different chiefs, of whom, Tubou, or Josiah, (our chief,) is acknowledged the head. Tubou was baptized in 1829, and has held fast his profession. He has some bad qualities, but so mild is his government, that one is reminded of the

state of the Israelites when there was no king, "and every man did that which was right in his own eyes."

1.—Nukualofa, which is the residence of Tubou. The other principal chiefs who live at this place are Uhila, Ulakai, Fielakelia, and the head chief's brother, named Abacaham. There are many other inferior chiefs and gentlemen,* or, as they are called, Matabules. The villages belonging to this place are Faga, Hofoa, Tofoa, and Kolona. Besides these there are several other villages at a short distance, but as they belong to the other chiefs, and have not turned to our religion, we are not allowed to instruct their benighted inhabitants; but when the other chiefs become enlightened, then our field of labour in this district will be enlarged.

2. Hihifo.—This continues to be a populous district, and is under the government of Ata. It appears that this chief, supported by others, has not embraced Christianity, but his sons have, with many others belonging to the district, and have suffered much in consequence of it.

3. Bea.—This is a strongly fortified village, governed by the chief named Taufa, otherwise Fae. This district is about the centre of Tonga, and Fae is one of the most powerful chiefs. His residence is not more than four miles from Nukualofa. Some of his children and people have embraced the truth, and as he would not allow them to attend to this new religion in his district, they are living under Tubou at this place, (Nukualofa.) The places belonging to the Bea, are Muofaya, Folaha, Nanuai, Nukuhilulu, Fetoa, Balalafa, and Fualu.

4. Mua.—This is another of the principal districts. It is at the east end of Tonga; the chief's names are Balu and Fatu: the latter he is generally called by here, he is a powerful chief, but not the king. He is the most corpulent man I have seen in all the islands; he is very kind to Englishmen, but very unstable in his disposition. The villages belonging to the Mua, are Touone, Fuaamotu, Haajini, and Agaha.

5. Vaini.—This is a populous village, under the government of a blind chief, named Maafu. Connected with it are the following villages, Tefiji, Togutu, and Tokomolo.

6. Houma.—This is a very populous village, and lies between Hihifo, and the Bea. It is governed by two brothers, one named Vaea, the other Finauinukava. There are two villages belonging to it, viz., Vaoutu, and Haakame. Near to the above place is Nukunuku, the chief of which is named Tuivakano. Connected with Nukunuku, are the following small villages, Matahan, Hule, and Halakaw. A few miles distant, is the village named Teekin, the chief of which is Motuabuaka. Hard by, are Faahefa, Buke, and Oa, three villages.

7. Eua.—This is a very fine high island, about twelve miles from Tonga.

The next of the Friendly islands we notice is the Hapae, (or, as we have it, the Haabai) group. These are very numerous, but generally small; eighteen of them are uninhabited. They lie to the north of Tonga, at the distance of eight or ten hours' sail, or about fifty or sixty miles. The island called Nomuka is one of the nearest to Tonga. This is a fine island, and has a lake upon it, which produces fish of a superior kind and

* This is a strange title to hear sounded among savages, but they are as proud of their grades as the civilized.

quality.* It is about seven hours' sail from Nomuka to Lifuka; which is another of this group, and the residence of the present King George Taupaahau, and the island upon which the missionaries live.

The names of the principal islands Haauo, Foa, Uika, Tugua, Lofaga, Tiotuhaa, Tofua, Kao, Kotu, Haafeua, Oua, Matuku, Tietoa, Tionsifua, and Mago. Tofua and Kao are high islands, and the former has a volcano upon it. The chiefs at these different islands, and who support the present king in his government are Tahama, Tuihaateiho, Taufalahi, Malubo, Tuihagana, Kabetahoa, Ufitua, Lolahea, Taufatofua, Soakai, Fehokohaabai, Naulivou, Lauji, Bagia, and Mafileo: the last three are the king's brothers. Besides the above mentioned chiefs, there are many others, and many Matubules. It is judged that there are about 4,000 souls on these islands, all of whom have embraced Christianity, except Malubo, who is a very old infirm man, and the people of Uika, who are governed by the old chief.

The present king of the Haabai group is the son of the late Tubontua. He is nearly related to the present Tubou at Tonga, and does credit to his Christian profession; he has a very strong hatred of idolatry, and his former superstitions.

Haano is one of the most northerly islands of the group, and is about one hour's sail, with a fair wind, from Lifuka; but as the wind is generally against them in going, it often happens that three or four hours are spent before they get to land.

III. The Vavau or Haafuluhao† group lies to the north of the Haabais, and is about fifty or sixty miles from Haano, that is, a day's sail with a fair wind. In sailing from the island of Haano, we generally keep Kao and Tofua in sight until Late, a high land belonging to Vavau, is discerned. This island lies between Kao and Vavau to the west, and, being a high land, is seen a long way off; and, on one of my visits to Vavau, we saw Vavau before we had lost sight of Kao or Late.

The Haafuluhao group is by far the largest, as the islands in it are more numerous: however, I believe there are not more inhabitants than at the Haabais. The present King is named Fimau Ulukalala. In Mariner's‡ time he was called Tuabaji. He received the Christian religion in May, 1831; and shortly after the whole of his people professed the Christian faith. Finau is supported in his government by the King and chiefs of the Haabai group, as well as by his own chiefs; the principal of whom are Tubo, Tuboutui, Fulivai, Fakatulolo, Halaenalu, Fotu, Api and Akauolu. The principal islands of this group are Vavau (where

* We wish the writer had stated whether the water of the lake is fresh or salt; it is probable, however, that it is salt, and that the fish are salt-water fish, and not such as are to be found in fresh-water lakes or rivers. The late Capt. Flinders, we believe, found fresh-water fish in a lake on the mountains of the Mauritius; a circumstance as curious as some species of fish being capable of living in both fresh or salt water.

† It is desirable that only one of the names of a group of islands be used by navigators, and the other entirely rejected; the use of both, indiscriminately, by different voyagers, creates confusion, and may lead to perplexity.

‡ He was one of the crew of the Port au Prince, cut off many years ago by the natives: he wrote an account of the Tonga islands.

the King and greatest part of the people live,) Kaba, Uga, Naubabu, Kolva, Ovaka, Ofu, Fofoa, Oloua, Fuaamotu, Cabe, Tauga, Gaunoho, Okoa, Toku, and Late ; and except Late, they lie very close together, are very convenient to visit, and are capable of supporting many more inhabitants than they have at present.

IV. The Niua or Kebel's islands are two in number. They are not very near to each other, and lie between Vavau and the Samoa group, called the Navigator's islands. The island which is frequented by the Tonga people is not large, and, from the best accounts I can get, has not more than from three to four hundred inhabitants. The inhabitants of both the Niua islands speak the Tonga language, but they are not on friendly terms with each other ; so that they seldom or never hold any personal intercourse. The Tonga people go frequently from Niua to the Samoa group or Navigator's islands in two days of fine weather. The principal islands are five in number, and the inhabitants are very numerous, they appear very mild in their manners, and open to receive instruction ; but at present are living in the grossest idolatry, and are without God in the world. The object the Tonga people have in visiting this group is to obtain canoes, mats, &c. The Samoa people acknowledge themselves inferior to those of Tonga, and for many years past have kept up a friendly intercourse. Some of the principal chiefs are related to our chief Tubou. Their language differs from the Tonga language ; but the Tonga can soon make themselves masters of it ; and we hope ere long to hear that the inhabitants of the Samoa group have turned from idols to serve the living God.

The Fegee group lies to the west of Tonga, and is about a day and a night's sail from it. The islands are numerous, five of which are said to be large: one which is called Ambowa is the principal island ; the King of which has great influence over all the other islands. The Tonga people are frequently visiting this group in order to obtain canoes. These are built partly by the Fegee people, and partly by the Tonga people, who take up their residence among the Fegeeans, and share in their labours or wars until the canoe is finished of which they are in want. It is sometimes two years, and often three or four years, from the time they leave Tonga before they return. The island to which the Tonga people generally go is named Lakemba ; the Chief of which is related to the Tonga people ; and many of the people on this island speak the Tonga language. The Fegee language differs from the Tonga ; the former having a great deal of the lisping sound of the *th*, and the hard sound of the *r*, which are not found in Tonga. These little differences render it difficult for a Tonga man to pronounce some Fegee words ; but I feel satisfied that an Englishman would very soon speak the Fegee language.

The Fegeeans are very numerous, and are a noble race of men. They are brave and hardy, but much addicted to war ; so much so, that they always have war instruments about them, by night and by day. In several of the islands, if not in all, they are quite naked until they are seventeen years of age, and after that period wear only a thin and narrow piece of native cloth. They are a very ingenious people, and very quick at learning anything. Some of them have been received into the Church of Christ at Tonga and Lifuka. But the inhabitants of this group are at present deeply sunk in wretchedness and idolatry. When

a Fegee chief dies, his wives are strangled, that they may accompany him to the other world. They have many other bloody and cruel superstitions by which their wretched lives are brought to a termination.

I trust our way is opening amongst them, and that ere long the Gospel trumpet will be sounded in all the islands of the whole group. I am happy to learn, that out of the crews of three ships, which have been unfortunately wrecked within the last year and a half at these islands, no man has lost his life by the Fegeeans. A few years ago, if a vessel had been wrecked at any of these islands, every man would have been killed, and many of them been eaten! I think this circumstance shows that the tone of feeling at the Fegee group is improving.

The above inference appears to us plain, and the effect to arise indirectly from the ameliorating spirit infused by the labours of the Missionaries into the hearts of the inhabitants of the neighbouring islands, wherein these devoted men have gained a footing.

The work of regeneration is necessarily slow, but it will eventually spread over the whole Polynesia, and redeem the wild denizens from their primitive state of barbarism and superstition, and bring them triumphantly into the pale of civilization.

This is a "consummation devoutly to be wished," and, however, some persons may harp upon the means and ways adopted to insure its fulfilment, there is no question but that the instruments employed in the holy work, are, collectively, entitled to the praise of every man who has a mind to think and a heart to feel, in the civilized world, for the good which has arisen from their pious labours. And it should be remembered that, if in the changes which have taken place, we discern that many of the people of the vast clusters of islands, studding the great ocean, have whilst rescued from their idolatry and ferocious practices, fallen into the sink of the immoral influences of civilization, the Missionaries are not to be blamed. The evil heart of man is everywhere apparent, and ages must yet pass, if such a blessed state will ever arrive, before even the most civilized people shall become so refined as to be without blemish. We need only to cast our eyes toward the two great metropolitan cities of the world, London and Paris, to pause before we shower our censures upon the body of good Samaritans for the mixture of evil which appears with the good in the islands of the South Sea. Impartiality demands that "the saddle should be put upon the right horse." To the visitors in the garb of sailors owe the natives much of the evil that is among them; to traders and deserters also. Let the captains of ships exert their vigilance to guard against the effects of the evil minded among their crews, and set an example themselves.

Mr. Turner, Vavau.*—This gentleman gives an account of a hurricane which passed over the Friendly Islands; he says:—"I must not omit to mention the storm with which we have been visited: very few are living who can tell of one that was half so destructive. It took place on Sunday, January 24th, 1833, about twelve o'clock at night. It was with difficulty we could hold our services on the Sabbath, for rain, wind, &c. We returned from chapel, and the wind still increased until midnight, when it became tremendous. We had retired to rest, but had to

* It will be seen that Mr. Thomas pronounces this name—Vavau.

rise: our fences were all blown down; the kitchen and my study were almost down. In a short time the house began to give way; one of the main posts broke close to the ground, another at the top. It was with much difficulty we got out with our lives. I seized Mrs. Turner, and hastened her out just as the house was falling. We expected to be exposed to the rain all night, not knowing but some falling tree, or part of the house, might hurry us into eternity. We made our way to a small house, where we found a partial shelter. It was made only of the leaves of the cocoa-nut tree: many of them were carried away, and the rain poured upon us in torrents. Several Leaders came to assist us, who, by holding the house all night, saved us from great peril. In the morning we ventured to come out, though the storm still raged; the house was completely demolished, beyond restoration; many of our goods were destroyed, many spoiled, and I have also lost some of my books. Not one fence was standing; every house was down, or nearly so; and our fine bread-fruit trees, cocoa-nut trees, bananas, &c. All the leaves of those trees which stood, seemed as though they had been scorched with fire. One half of the houses on the island were blown down, some lifted entirely out of their place. The effects of this storm will be felt for many months, perhaps for years."

There is no mention of the directions in which the wind blew, which is to be regretted, as we know little of the action of these storms among the islands of the Great Ocean: they appear, however, to move toward the west.

Mr. Watkin, Haabai islands.—It appears that since the introduction of Christianity, the wars which desolated the islands formerly have become less frequent, and in due course of time will, no doubt, entirely cease. This is one of the fruits of Missionary enterprise, and must be hailed with delight by all thinking persons; even the natives who are still unredeemed, acknowledge the good that is done. Mr. Watkins says: "I took occasion to remind them of the many and great advantages accruing to them from Christianity. An opposer of 'this way,' a short time ago, stated to me as his conviction, that, if Christianity had not been introduced, the whole race would have been almost extinct through war and its concomitant evils. Surely we may believe an enemy when he speaks well of what he opposes."

This gentleman has adopted a short catechism for the purpose of impressing upon the minds of these wild children of nature, the impropriety of their evil ways; which no doubt is a wise plan, as, to expect amendment, it is first necessary to convince a person that he has been acting wrong. It excited great interest, and I hope will be productive of good. The following is a sample of its style and subjects:—"*Who are they that love war?* The true sons of the devil. *What are they that seek war?* Wild beasts thirsting for blood. *Who are they that have more wives than one?* Thieves who rob other men, sinners against God, and in the highway to destruction."

Of Foa he thus speaks: "It is a fine island, but has to mourn a diminished population, from the evils connected with idolatry, which have been in active operation there, as in all the other islands of this group. Some are entirely depopulated, others nearly so."

He gives an interesting account of the conversion of Tahama, a female

chief of the highest grade, built to be most noble among the great of these islands. She has been treated like a goddess, and was one of the chief pillars of the system of idolatry that obtained in these islands. Numbers who had been waiting for her decision accompanied her, perhaps not fewer than one hundred, they came from their own island in thirteen canoes.

A hurricane passed over Lifuka in March 1833: the following is this gentleman's account of it. "On the evening of the 8th instant a storm commenced in the place, more violent by far than that in January. It raged furiously the whole night. To sleep was impossible, the wind came in such fearful gusts, the sound of it resembling the roar of artillery, or being perhaps more like the angry dash of waves against rocks in a storm. We anxiously looked for morning: but it brought no intermission of its violence. Nay, it seemed to increase in fury. We did what we could to preserve the house, for the safety of which we began to entertain some fears. We were at length obliged to quit it, from the alarming shakes occasioned by the wind. We retreated into another house, which was secured as well as circumstances would allow. There we remained the whole day, fearing to hear at every recurring blast, the crash of our falling house. But, through mercy, we were not called to endure that trial. Towards the evening of the 9th, the wind shifted and slackened."

They who have described the climate of these islands to be that of a paradise, knew as much about it as they knew about the climate of the moon. These are stormy latitudes, and the atmosphere is subject to the most sudden and extreme changes.

Mr. Watkin states that, idolatry may be pronounced to be defunct in the group of islands which form his station, the Haabai islands. Uiha the last hostile island has been reclaimed, it was taken possession of by the head chief of the Haabaies without any effusion of blood, and the opposing chiefs degraded, but the ruling one has been allowed to retain his position, and has become favourable to Christianity. The island is fruitful, and savages, as far as it was examined, of the general character of the friendly islands. One of the Chiefs, Havenhuna, is the person who occasioned the cutting off of the Snapper some time ago at this island: he has since renounced his heathenism.

On the 30th of April, 1832, Mr. Watkins says: "We have just experienced the trembling sensations inspired by an earthquake, of which we had two distinct shocks, which lasted about a minute. Our house vibrated very sensibly, and I was afraid the rude structure would fall; but after reeling like a cradle for several seconds, it became once more quiescent, and we finished our dinner under its roof of thatch. Immediately after the first shock, I heard the commencement of the usual cry; but it was forthwith checked, perhaps by the people's recollection that they had cast away the fables they once believed. It was their practice to raise a general cry upon the occurrence of an earthquake, to rouse the sleepy attention of Maui, the God to whom the drudgery of Atlas is (or was) assigned in this part of the world. Upon the occurrence of earthquakes, they imagined he was nodding, and to prevent their being precipitated into the sea, they raised a cry, strong enough to rend the welkin; at the same time belabouring the earth with blows which nothing but an inanimate object could bear. Most of them now know better."

about 620 miles, the north-east margin passing over the island of New Providence, at which place the wind is reported to have been from south-east to south-west. At 10 a.m. the meteor changed its route from north-west to north, giving the changes (which proved it) from north-east to north, north-west, and finally the west; at noon it had declined in violence. The meteor probably continued to curve to the north-eastward, the focus passing over the peninsula of Florida.

The exterior verge at the commencement of the storm at Montego Bay was, distant from the Havana, about 300 miles direct; this was at 9h. 30m. p.m. of the 4th. By mid-night it had reached the Havana, so that, in 150 minutes it had shot over that distance! A rapidity of dilation that is very remarkable. The centre was 13 hours reaching from abreast of the west end of Jamaica, to abreast, or east, of the city of the Havana, a distance of about 360 miles direct; the rate of progression during the transit, being under the average of 28 miles an hour.

As no calm supervened when the centre passed not far eastward of the Havana, we may infer that this feature was wanting in this storm, or limited to a very small extent; altogether it is of value, as an example to familiarize seamen with the variations in the operation; and, as such, I send it to you, Sir, to retain as a record until further accounts confirm the inferences, or refute them; unless you may think the paper would be sufficiently interesting to your Nautical readers, for immediate insertion in the "Blue book."

I have the honour, &c.,

January 1*st*, 1845. STORMY JACK.
To the Editor, &c.

Hurricane at Montego Bay, Jamaica, 4th and 5th October, 1844.

WE have seen only one account of this storm, and that a very meagre one, it states that since the year 1818 there has not occurred such a dreadful visitation at this place as was witnessed on the 5th of October, and yet only the margin of the circle passed over this place. The fact generally seems to be that memory, or the recollection of past events of this nature, does not always serve the judgment, and it usually appears to the mind of an observer that the *last* storm is considerably more violent than preceding ones. Nevertheless, the remark is often consonant with truth, but it must depend on the part of the circle which strikes the place, in a great measure, to give a character to the storm of great severity or otherwise. In the present case, the wind having blown from the south, it is obvious that the body of the storm past to the westward of the island, as the eastern margin alone appears to have brushed Montego Bay. We presume that the eastern parts of the island felt little or nothing of the commotion; we infer this, not only from the point the wind blew from at the bay, but from H.M.S. *Hornet* having sailed from Port Royal for England on the 5th, the day when the hurricane was raging at Montego Bay to the north-westward. She would scarcely have done this if a gale was blowing at Port Royal.

It appears that on the night of the 4th, the weather, which had been
lays past rather threatening, assumed an unusually lowering and
's appearance. Between 9 and 10 p.m. it commenced to blow

very hard from the south ; a strong ground swell heaved into the bay from about 3 p.m. and at about a quarter to 2 a.m. (5th) on Saturday, it acquired a terrific force. There was during the day comparatively little wind, but the sea raged in the most dreadful manner.

It is impossible to describe the havoc that has been occasioned. The whole line of coast from Christie's rock to Cathren's beach has been ploughed up, and bears more or less marks of the extraordinary violence of the sea. A number of schooners, sloops, boats, and canoes were wrecked, wharfs and houses damaged. Persons of all classes and sexes were to be seen hurrying about in the greatest possible state of agitation and alarm. The sea rose higher than it has ever yet been known to do, and the waves dashed into the bay with a noise equal to that of the loudest thunder.

Such is the account from Montego Bay. It seems remarkable that the wind being an off-shore one, the waves should have run into the bay in opposition to it ; but there is no doubt of the potent effect which an advancing meteor of large dimensions has upon the whole sea surface embraced within the lines of the progressive course, antecedently, and long in advance of the storm itself. The water pressed forward by the meteor coming up from the south-eastward, found its way round both ends of the island, into the channel between it and Cuba, and so deluged the shores, though at Montego Bay the wind was in opposition. It is probable the swell was felt where the storm was not. It was about six or seven hours in its transit ; but had the centre passed the locality its continuance would have been considerably longer. The Caymans must have come in for its utmost severity, and I dare say we shall hear of sad work among the cocoa-nut trees.

In its progress north-westward, it foundered the Liverpool ship Elizabeth, somewhere near the west extreme of Cuba. This was on the 5th. The gale appears to have come on the 4th at night, wind from the westward, (probably north-west) she lost her masts, sprung a leak, and went down, crew and passengers took to the boats. Two of those have been picked up, one at Sisal, Campeche, the other by a brig. The launch with the Captain (Paton) not heard of ; there were twenty-two persons in her.

S. J.

Something New for the Hurricanists.

The accounts from Mexico state that at Yebu, in a late hurricane, a tremendous water-spout passed through the place, doing much damage. It was about twenty feet wide. In its course it passed over two houses, driving the roofs in, and entirely destroying one : five children were killed in one of the buildings. The effect was the same as if a violent river head had run through the town. Trees, grass, and every thing that came in its way were torn up.

This is a phenomenon we should not have expected during the continuance of a furious storm of wind, as these meteors have hitherto been experienced in calms, or light airs. *Query.* Was it the nucleus ; or tube of ascent of the circular current of air pertaining to the hurricane--- the so-much dreaded centre ? Something of the sort occurred lately on the European coast of the Mediterranean.

Selections from Ancient Naval Records.—No. I.

(Communicated by John Barrow, Esq., F.S.A.)

The accompanying vocabulary of sea terms has been discovered in the State-Paper Office. The volume in which it is bound contains papers from 1601 to 1637. Many of the terms, indeed the majority, will be found to be precisely similar to those now in use. How long they may have been so prior to the above period it is impossible to form a conjecture; but as upwards of two hundred years have now elapsed since this vocabulary was written, it may not be uninteresting to some of the readers of the *Nautical Magazine* to glance over the "Names and Termes"; some of which they will perceive are now entirely obsolete, whilst others will afford to the curious in these matters, the undoubted derivation of words daily in use on board ship, such as for instance, "*Dead-eyes*, Dead-men's-eyes;" "*Futtocks*, Futt-hookes (Foot-hooks,)" "*Bowsprit*, Boult-spright," "*Kelson*, Keele-sonn, (Son of the Keel,)" &c.

On the other hand there are many terms now in use which were not known in the olden time, and among them are the words "starboard" and "larboard," the derivation of which has afforded many a discussion. Perhaps some of your contributors may offer a suggestion as to their origin. You are aware by a recent order of the Admiralty the word "port" is now directed to be substituted for larboard, which will prevent the frequent mistakes arising from the similarity of the words larboard and starboard.

Admiralty Papers, *M.S.S. State-Paper Office.*

An Index of Sea Terms.

An Index of the Names and Termes of all things perteyning to the Practique of Navigation.

Afte or abafte
Aloofe
A Mayne
Anchor
Anchor Stocke
Anchoring or anchorage
an Awninge
Axeltree
Armings

to Bale
Ballast
to Beare of
Beare upp
Beare
y^e^ Beake or Beakehead
Beame
Bedds
to Belaye
a Bende
o Bende or bent
Bildge or buldge
Bildge water
y^e^ Bitts
a Bitter
y^e^ Bittakett
Bight
Bitter ende

Blockes
Blowe
Bluffe or bluffe headed
Boate
a Bonnett
a Boame
Berde or a boarde
a Bower, the bowe
Boulte or boults
a Boult roape
Bowlinge
Bowse
Boult spright
a Buoy
Bracketts
Breaming
Breeche and breeching
a Breize
a Budge barrell
Bulke
Bulke head
Bunte
a Bunte line
a Butt
y^e^ Buttocke
Breast hooke

Cabell

a Calme & becallminge
Camber or cambring
Capp
Capp squares
Cappstayne
Cappstayne barres
Careene
Cartridge
Card or sea card
Carlings
Carling knees
a Cariage
a Case
Case shott
Casketts
Catt
Catt holes
Catt harpings
Caulke
Chafe
Channell
a Chamber
Chaynes
Chayne walls
Charge
Chase
Cheeks
Ches Trees

Clinking
Choake
a Cleate
a Clewe
Clewe garnett
Clewe lyne
to Clynche
a Clyncher
Cloathe
Cloyde
Coaming
Cookes
Cooke roome
y° Combe
y° Coller
Compasse
to Conde or Cunne
Counter
Course
a Crabbe
a Cradle
Crafte
Crancke
Crengles
Crosse barre
Crosse piece
Crosse trees
Crowe ffeete
Cubbridge heade
Culver tayle
Cutt
Cutt water
Clampe

y° Davitt
Dead menn's eyes
Decke
Deepe sea line
Deepe sea leade
to Dispert
Docke
a Drabler
Draggs
Draught
Dredge
Drive
Ducke upp

Earing
to Ease
an Eddie
an Eddie winde
Ende for ende
Enter
Entring ladder
Entring ropes
Eies

Ffaddome
Ffalls
Ffall of
a Ffake
Ffenders
Ffender boults
Ffidd
Ffidd hammer
Ffire workes
Ffeight
a Ffiake
y° Ffishe
Ffishe blocke
Ffish hooke
Fflaggs
Fflavre
y° Fflye
y° Fflooke
Ffloane
Fflowe
y° Flower
Ffloate
Ffloode
Fflush
a Fformer
Fforlocks
Ffowle
Ffowle water
Ffounder
y° Ffore foote
Ffore mast
Ffore reach'
Ffore sayle
Ffore top mast
Ffore yarde
to Free
Ffree shott
Ffurr or furrd
to Ffurthell
Ffurthelling lynes
Ffutt hookes

Gage
Gale
y° Garboard
Garboard streake
y° Garnett
Goaring
Goose winge
Grappnells
Gratings
to Grave
a Gripe
to Gripe
Ground and groundings
Ground tymbers
Grometts
to Gull

y° Gunwall
a Guye

Hale, or halinge
to Hand or handing
a Handspeeke
y° Harping
Hatches
Hatchwaye
to Haule or over haule
y° Hawses
a Hawser
y° Heade
Head sayles
Head sea
to Heave
y° Heele
to Heele
y° Helme
to Hitche
y° Hookes
Honey combe
a Horse
y° Houlde
to Houlde off
Holesome
Howsing
y° Hownds
to Hoyse
y° Hull
Hulling
a Hullocke
Hamaco

y° Jeere
Jeere capstayne
Ilett hoales
Iron sicke
Juncke
Jurye maste

to Keckle or Keckleing
a Kedger
to Kedge or Kedging
y° Keele
Keele sonn
y° Keele roape
Kenke
a Ketche
Kevells
Knave lyne
Knees
y° Knights
Knotts

to Labour
to Lade
Ladder

a Ladle
Land turne
a Land lockett
a Langrell
Lannyers
Lanche
Large
to Lashe or lashers
to Lase or lasings
Lasking
Latchetts
Leake
Ledges
Lee
ye Lee fangs
Leggs
Lett fall
ye Leetch
Leetch lines
Lymber or lymber hoales
Linse pinns
Lockers
a Log lyne
Loome
Lomegale
ye Loofe
a Loofe hooke
a Lust

to Mann
a Mann of warr
ye Manger
Marling
a Marlinge speeke
Martnells
Mastes
Matts
Mettle
ye Missen
ye Missen maste
ye Missen sayle
ye Missen yard
ye Missen topp mast
to Mounte
Muncke seame
Murderers
Mooringe

Neapes or neape tides
the Needle
Nettings
Netting sayles
Nippers

to Observe
Ockam
Offing
Offward
Orr lopp
Oversett
Overthrowe
Out licker
Owze or owzie

a Pantike
a Parrell or Parrelling
a Partuncle
ye Partners
the Paule
Pay
Peeke
Pendants
a Pintell
Pitching
Platts
Plott
a Poynte
a Porte
to Porte
Powches
Powder
ye Powder roome
Preddie
Prinninge
ye Prowe
Puddings
Pullies
Pumpes
ye Pumpe brake
ye Pumpe canne
ye Pumpe dale
to Purchase
Puttocks

ye Quarter
Quarteriug
Quarter decke
Quarter winds
to Quoyle
a Quoyle
Quoynes

Rabbeting
Rake
a Rammer
Rame head
Ranges
Ratteling
a Reache
to Reeve
Ribbes
to Ride
Riggінge
Rigg boults
ye Risings
Rising timbers
a Roade
Robins
a Roader
Roofe trees
Roapes
Roape yearnes
ye Rowle
ye Round howse
Round in
Rove and clincke
Rung heads
ye Runge
Rowse in
ye Rudder
ye Rudder roape
Rudder yrons
to Rummidge
ye Runne
ye Runner

Sayles
to Sarve
a Scarfe
a Scuttle
to Sease or seasing
a Seele
Sende
Settle a decke
to Sett a landsunne, or shipp by a compasse
Serving or to serve
the Shancke
Shancke paynter
Shackles
Sheats
Sheathing
Shearing
Sheere hookes
Sheepe shancks
Sheeres
Sheevers
the Shore
Shores
Shott
Shott of cable
Showle
Shrowds
the Sillender
Synnett
the Skyffe
the Skegg
Skuppers, or skupper hoales
Skupper leathers
Skupper nayles
a Slutche
Sleepers
to Slinge

Slings
a Smitting line
a Snatch blocke
Sockets
a Sounde to sounde
Sounding line
Soundiug leade
Speekes
a Spell
to Spell
to Spend
Spindell
to Splice
Splitt
to Spone
to Springe
ye Spring or spring tyde
Spritt sayle
Spritt sayle topp sayle
Spritt sayle topp mast
Spritt sayle yard
Spunge
Spunn yarne
Spurketts
Standing roapes
Standing parts of running roapes
to Staye, or bring a shipp a staye
Stayes and back stayes
to Stene or stening
ye Stemme
a Steppe
ye Sterne
Sterne sheate
to Steere
ye Sterrides
Stewards roome
Stoked
Stopp
a Stopper
to Stowe
a Strapp
a Streach
a Strake

Streamd cable
Streame anchor
to Strike
Studding sayles
a Sturropp
Surge
Suck
Swifters
Swiftinge

Tacke
Tack a shipp
ye Tacke
Talle
Tampkin
Tackles
Tapering
Tarrpauling
Taber bore
Taunt
Taught
a Tempest
ye Taughts
Thight
Thewles
Thwart shipps
Tides
Tire and ties
ye Tiller
Topp almours
Topp ropes
Topp mast
Topp gallants
to Towe
Transome
Trauers
Trauers boarde
Tree nayles
ye Trinme
Tressle trees
to Trie (or triet)
to Trise
ye Trough of the sea
Truckes
Trunnions

Trusses
to Turne

Veere
Veering
Violl

Wafte
ye Wake
Wale
Wall reared
Wallte
Waninge
a Warpe
to Warpe
to Watch a shippe
Wash of the shore
Wast boards
Wast cloathes
Water borne
Water shott
ye Water way
Watche
ye Water line
Wave of a shippe
to Weather
Weather bowe
to Weather coyle
Wedges
ye Whelpes
ye Whipp
Whooding
Winde
Windlasse
Windtaught
Winding tackle
Wood and wood
a Worm
Worming
to Would or woulding

Yard
a Yoake
a Yawe

[The above "index" will interest our readers who are curious in the manifold sources of derivation from which our Nautical terms are obtained. Among others we observe the "sea card" or "chart" and again "dead-men's-eyes" seem to account at once for the lower rigging being termed the "Shrowds", a shroud being a ready association in the mind of a seaman even of the present day, with such objects and no doubt were much more so in those of our still more superstitious seamen of two or more centuries ago. We perceive in the list another term which has been the subject of discussion in our last volume, we mean the "waye" of a ship, from which the verb "to waye" became used as we shewed out of Luke Fox's quaint work, and degenerated in later years, into an expression applied with more propriety in allusion to weight than with reference to the "waye" of a ship. We have here however, thanks to the

industry of Mr. Barrow, a Royal Authority for re-instating in its proper place this ill used piece of Nautical phrascology: so let us hear no more of "weighing" anchor. With regard to "starboard" and "larboard," we have heard the Italian words "*questo bordo*," and "*quello bordo*," given as the origin, but how certain we will not say.—Ed.]

Heaving Down of H.M.S. Formidable, *in February* 1843.

In page 11 of our last volume will be found a sketch of the damage sustained by H.M.S. *Formidable*, when she grounded near Barcelona. Having in a former volume given an account of the heaving down of H. M.S. *Melville*, a comparison of proceedings with her, and the same operation with the *Formidable*, the following account of which a correspondent has obligingly sent to us, will, no doubt, be interesting to the readers of the *Nautical*.

The *Formidable* arrived in Malta harbour on the 13th of January, 1843, and received orders to prepare for heaving down; the ship was accordingly moored head and stern with her bower chains and anchors off the careening wharf, and cleared of every iota, not a pig of ballast or a moveable article was left in her, with the exception of the coppers, range, and main deck tank, which were all well shored from the ship's side, and otherwise secured. As the ship was to be hove down on starboard side first, the hammock nettings on that side were removed, and the partners of fore and main masts on *upper* and *main* deck were taken up.

Bulkheads.—The bulkheads were three in number, two were placed on main deck, one at each end of starboard skids, and the third was built across under the break of the first. All of them were constructed in the following manner. Strong coats were nailed to the beams overhead and deck, into these were morticed strong half round uprights, against the flat sides of these were placed the planks which went athwartships, the workmen commenced boarding from top and bottom, which from the sheer of the upper deck left the space to be filled up by the last or midship plank, in the form of a wedge. By this means, where the board was driven in, the whole thing was wedged up taut; the bulkheads were caulked and payed, then shored up behind from the beams, and from cleats nailed to deck. All the bulkheads extended from the ship's side to amidships.

Ports (*on starboard side.*)—Lower deck ports were barred in and caulked, the scuttles in them well screwed in and boarded over outside, then payed with pitch. The main deck ports (with the exception of the four midship ones between the bulkheads, which were left open,) were boarded in with 2-inch plank, then caulked, and shored up from inside to a cleat on the deck.

Out-riggers.—Of out-riggers there were nine to main-mast, five on lower deck, and four on main deck; seven to foremast, four on lower deck, and three on main deck; those on lower deck were square balks of timber 2 feet in the square, 40 feet 6 inches long, and were placed in ports as near abreast as possible of the respective masts, there secured by being well chocked in ports; the heels butting against combings, bitts, &c. Where there were none, they had a heel-shore from starboard waterway, and were also secured from fetching way or rising, by being

well shored in every direction. The main deck out-riggers were about 18 inches in the square, and 35 feet long, were placed and secured in same manner as those on the lower deck. All the out-riggers were rounded, shouldered, and cleated at about 18 inches from outer end for rigging to butt against.

Out-rigger martingales.—Out-rigger martingales were 8-inch rope, fitted with a large thimble at each end, they were middled, and taken with a round turn over the end of the spar, there seized; those of main deck pulled up to short chocks in lower deck ports; those of lower deck port to spare shackles driven through ship's side, and forelocked inboard. Starboard scuttles, scuppers, and chain pump dill were all plugged up and boarded over outside.

Pigeon holes.—Of these only those between main deck bulkheads were filled in and caulked, being the only place where water was allowed to come.

Bilge pumps.---Of these there were five, two in fore hatchway, two in main, and one in aft hatchway. They were stepped in the lower deck ports for wells, and the lower deck was scuttled, abreast the hatch ways close into starboard water way, with a Dowel engine to allow the water to pass up from orlop deck to pumps. Temporary stages were erected in squares of hatchways for pumping party to stand on whilst working.

Masts.—The main was stripped of everything but lower rigging, the tops and cross-trees being removed. It was fished on fore and aft sides, the heads of the fishes went close up to trustle-trees, and the heels down to lower deck; partners on upper and main decks being away allowed sufficient space for their passing down. The fishes were woulded in nine places, nine turns in each lashing, (three-inch rope), and well wedged up. The mast was stayed perfectly upright, both main-stays were taken on lee side of fore-mast to allow that mast to come well over on port side, the upright shores to main-mast were three in number; the first and largest was a rough twenty-two inch hand mast, and went up within six inches of the trustle-trees, the head being chamfered off to allow it to rest against the bibs; the second was placed a third lower down, and the last about half way between the head of the second and the deck: they were all secured to mast by a head lashing, and had also horizontal shores between them and the mast, of pieces of oak plank about 2½ inch thick, they were placed wherever the belly lashings were passed, and proved an immense support to mast. Of the horizontal shores and belly lashings there were three on long shore, and one on each of the others. All the heels of upright shores rested on a thick elm plank laid along water ways, the deck being well shored underneath.

The preventer rigging for main-mast consisted of eight shrouds and one pendant 13-inch rope, fitted with a long leg, and that one had an eye splice in the end of each. In placing them over the masthead, the long leg was put foremost, as it set up to the foremost lower deck outrigger; the short one to foremost main-deck outrigger; two pair of shrouds were placed first to form a bolster for purchase-blocks; then the remainder of shrouds; lastly, the pendant with a lashing eye. This rigging was pulled up by double 20-inch blocks, double-stropped, the eye of shroud was taken *through strop* and toggled, (as falls were secured to toggles, when pulled up this brought the strain on shroud instead of

strop,) the lower block strops, went over the end of the outriggers; and the falls used were 7-inch rope.

The fore-mast was secured precisely the same as the main-mast excepting it had but one fish, and that on the aft side, seven shrouds, 13-inch, two upright and three horizontal shores, and belly lashings, and both fore and main masts had when secured runners and tackles steadied forward to assist the stays, the heels of fore and main mast were well shored in the hold on port side. The mizen-masts was stripped of every thing the same as other masts, excepting the cross-trees, were left on. The only support given to this mast beyond its own rigging, was the hooking of the stay tackles from mast-head pendants to weather chains, which took some strain off the rigging.

Setting up Rigging.---The masts were steadied over against the port lower deck partners, the wedges having been removed, the starboard rigging was then pulled up for full due; the preventer rigging was pulled up with luffs on its own falls, and secured to toggles; the standing part of fall went with running eye over the end of outrigger. The *preventer rigging was pulled up last.*

Mast-head purchase blocks.---Main main purchase block, 40-inch, main small ditto 30-inch, fore ditto 40-inch, all treble sheaved and treble stropped.

The 40-inch blocks were in the first place double stropped with 9-inch rope cable laid, with a large eye to take turns of lashing, and had also a preventer strop of 9-inch rope, long enough to go round the mast-head, where it was secured with two lashing eyes.

The 30-inch block was stropped with 8-inch double, 9-inch preventer fitted as above: the purchase-blocks were lashed at main-mast-head after the first two pair of shrouds were placed; and at the fore after first pair of shrouds. As there were two main purchases the largest was lashed on foremost quarter of mast-head, and the smaller on after quarter, but no shrouds were between them.

Lashing purchase-blocks.---The lashings were salvagees, 500 new yarns, 30 fathoms long, those for preventer strops were same size, not so long, and had been used before. In lashing the blocks the fore and main runners were used in the following manner:---Suppose the main to be the block to be lashed, the fore runner pendant block was fast at fore-mast-head, and the runner taken to main-mast head, the tackle was hooked up and down fore-mast, and had a tricing-line on upper block from foremast head; a gant-line was bent to runner pendant, about 5 fathoms from main-mast head. This was to overhaul the runner after it had been pulled up; the salvagee was middled and seized to strop in the eye, then one end was passed round mast-head, through the eye of strop, the racked to runner pendant, which was pulled up on deck, when taut enough, and the turn of lashing had been racked, the runner was overhauled by gant-lines and tricing-lines as beforementioned. To shew how taut these blocks were lashed when the ship was down, the eye of the strop had not come off from mast-head above an inch and a half. I think lashings ought to be knotted every third or fourth turn in case of one part going.

Pit purchase blocks.—The pit blocks were double 40-inch, double stropped 9-inch rope; the leading blocks 36-inch single stropped. The

double blocks were stropped on the bars in the pits; the leading blocks had strops long enough to go round one bar and lash to the other, there being two in each pit.

Capsterns.—The capsterns were three in number, of the same sort as those used at sheers; twenty bars each, six men on each bar.

Tripping cables.—Of these there were two, one forward and the other aft, fitted as follows: one hemp cable having been chafed when bearing the ship off at Barcelona, it was condemned and cut in two and used for this purpose. Two purchases of new nine-inch hawsers through treble 40-inch blocks were rove for aft tripping cable, one block was lashed on shore round the arches of the buildings on the opposite side of creek abreast the careening wharf, (creek about 60 fathoms wide) and the other block was clenched to end of sheet cable, and then hung to a lump to keep it off bottom; the other end of that cable was taken under ship's bottom and brought up on starboard side through one starboard upper deck port before aft hatchway, then across the deck and clenched through two ports on larboard side. The fore tripping cable fitted the same as that aft, but came through third port on forecastle starboard side, made fast as before-mentioned; from its leading over fore channels they were well shored up, but they were burst down from immense strain on them when the ship was half down.

Righting-cables.---Were fitted the same as the above but smaller, the stream cable being used instead of sheet, the shore blocks were lashed to bars in the pits, the cables went under the bottom, and clenched through port main deck ports. These were precautionary measures, no strain being ever on the cables.

Reeving Lines and falls.—Reeving lines, new 7-inch rope, about 150 fathoms long; falls fore and main 10½-inch quite new hawser laid rope; fall for second main purchase 9-inch new hawser laid rope. The 10½ was reduced to 9½ when unrove; the falls were 140 fathoms long, and then rather short.

Heaving down.---Tuesday the 7th, hauled taut tripping cables, and rove the falls: ship's draught forward 14 ft. 11 in., aft 18 ft.

h.	m.	s.		Inclination°
8	27	0	Commenced heaving	7½
8	29	0	Falls taut	10
8	30	0	Avast heaving to plug chain pump dill.	
8	37	0	Hove round	
8	37	30	Copper awash	20
8	39	0	Fore channels burst down from strain of tripping cable.	
8	42	0	Midship lower deck port-sill awash . .	32
8	45	0	Ditto " upper port-sill awash .	41
8	49	0	Lower sill of midship main deck port awash .	52
8	51	0	Upper ditto " " " .	57
8	53	0	Outer edge of plank sheer . . .	63
8	54	0	Inner ditto " ship's keel out .	66
9	0	0	Avast heaving, skid cant three inches clear .	80

Lashed mastheads down and eased back purchases to bring equal strain on all parts, drift between blocks 11 ft. 6 in. forward, 14 ft. abaft, keel amidships 4 ft. 6 in., clear of water, lee side of spare hawse 3 ft., out

stern port 3 ft., ward room stern port 4 ft. out. At 5 o'clock mast taking against lee side of *lower deck* partners, eased up to pull up rigging; shortest time occupied heaving down twenty-one minutes, easing up nine minutes; reeving falls occupied twenty-five minutes. We unrove whenever we eased up, but always kept the reeving lines rove, but well overhauled. Longest time ship was down was forty-eight hours, and was kept quite free by one of Hearle's engines; and was only eased up when completed.

When hove down first time we found the ship's buttocks hove her stern so high out as to be inconvenient to the workmen, therefore before she came down a second time we lashed thirty butts under fore chains, which had the desired effect of keeping her keel parallel, and enabled the artificers to work both at the bow and stern at the same time.

Damage done to vessel.---11 ft. 6 in. of stern post gone, 50 ft. main keel, all the false keel, with the exception of about 20 feet, all her gripe and fore foot down to the hooding ends, garboard streak and dead wood abaft.

As there were many disputes about the weight of *Formidable's* rudder I give you the weight of the one made for her at Malta, when it was quite new, previous to launching, 6 tons, 3 cwt. 20 lbs. I should think the one lost being sodden, and made up of African oak, could not have been much short of 10 tons.

Local Attraction.

At Sea, November 1844.

Sir.—Looking at the numerous instances of local attraction interspersed through your valuable volumes, and comparing them with the rules given by yourself and by most other writers on the subject, for the computation of its amount, it appears to me that the disturbing cause has been uniformly considered as acting alike on both compasses.

This is, I believe, the most general and certainly the most simple form of Local Attraction.* The following instance, however, which happened to myself coming out of the Bay of Fundy, some seven years since, may serve to shew that it sometimes takes a more complex form.

Being appointed to the ship a short time before she was ready for sea, and that time being fully occupied, precluded sufficient care being given to the compasses.

We sailed, steering along shore, and being well acquainted with the coast, little notice was taken of the compasses on the first day.

On the morning of the second it came on to blow fresh from the southwest, with a most dense fog, the ship then between Grand Manan and the Wolves, barely able to carry whole sails to beat through the west passage.

* This is not the case. Local attraction is very seldom uniform in its effects on either compass, and we have always recommended that the effect of it on that compass which *is used* should be known. Thus, if a binnacle on each side is used, the local attraction on each should be known and applied.---Ed.

Now, the soundings here being little or no guide, in a fog, you have nothing but the compass and watch for it. The day wore on in beating through; the wind apparently very complaisant, hauling three or four points in our favour each time we tacked; this, for a few boards passed as a lucky chance, until casually looking at the lee compass, I found a discrepancy of three points. This of course put me on my guard, so I kept a most vigilant look out, having every thing clear, and every one on the alert. When in preparing to tack off the Quoddy side at 4 p.m., and to get a cast of the lead while in stays, we saw the land not twice the length of the ship ahead, the helm was instantly put down, all the lee braces and anchor let go; the chain run out to about 18 fathoms in the hawse, when the anchor caught in or under the cleft of a rock, the helm being down, and the spring of the yards themselves bringing them aback had checked her way considerably, and the anchor suddenly bringing her up, she dipped a little forward, snapping off the flying-jib-boom, which was protruded over a projecting cliff; her bottom fortunately did not touch, as, whether by the offset from the rocks, or the recoil of the chain, or from both, she sprung astern, turning on her centre at the same time. A coil of lanyard rope laying fortunately at hand, the bight of it was made fast to the chain outside the hawse for a spring; the chain providentially unshackled at one blow, the yards were filled, spring cut, and we stood off safe and sound; the whole passing so quickly, that but for the undeniable evidence of the unfortunate boom we might have supposed it some waking dream. After such a lesson you may be assured I was no longer inattentive to the compasses, although I had as I supposed a pretty good idea of local attraction, yet finding no variation on one tack, and five points on the other, the compasses differing with each other to the amount of three points, and neither of them right, it was for some time a strange puzzle to me, and some days elapsed before I discovered the cause of it; that done it all appeared plain enough. I shall endeavour to describe it to you.

The foremost standard of the wheel was of iron of two inches square, and thirty-eight inches from the centre of each compass; the centres of the compasses were two feet apart, making each at the standard, an angle of 18½° with the ship's keel; I have since thought that the iron must have been highly magnetized as I have seen similar standards in similar situations, without causing any extraordinary derangement. The following table of the deviation is calculated on the supposition that the effect would be in proportion, as the series of the angles subtended at the north point of the card, between the standard of the wheel, and the centre of compass, leaving out all minor considerations, and no where disagrees to the amount of a quarter of a point, with the table I constructed at the time from amplitudes, and by which I was enabled to take the ship safely to Liverpool and back to St. Johns, N.B., where we got the iron replaced by wood.

Should you consider the above worthy a place in the *Nautical Magazine* it might, perhaps, be of service to others in similar circumstances.

I am, &c.,

To the Editor, &c. J. G.

MAXIMUM DEVIATION 26°.

LARBOARD COMPASS. Points of Max. Dev. N. 77° W. and S. 66° E. of change N. 18½° E. S. 18½° W.				STARBOARD COMPASS. Points of Max. Dev. N. 77° E. and S. 66° W. of change N. 18½° W. S. 18½° E.			
POINTS	DEV.	POINTS.	DEV.	POINTS.	DEV.	POINTS.	DEV.
	°+′		°−		°+′		°−′
N.b.E.	3 0	S.b.W.	3 6	N.b.W.	3 0	S.b.E.	3 06
North	7 36	South	8 36	North	7 36	South	8 36
N.b.W.	11 56	S.b.E.	13 36	N.b.E.	11 56	S.b.W.	13 36
N.N.W.	15 54	S.S.E.	18 00	N.N.E.	15 54	S.S.W.	18 00
N.W.b.N.	19 23	S.E.b.S.	21 30	N.E.b.N.	19 23	S.W.b.S.	21 30
N.W.	22 18	S.E.	24 00	N.E.	22 18	S.W.	24 00
N.W.b.W.	24 23	S.E.b.E.	25 30	N.E.b.E.	24 23	S.W.b.W.	25 30
W.N.W.	25 41	E.S.E.	26 00	E.N.E.	25 41	W.S.W.	26 00
W.b.N.	26 00	E.b S.	25 27	E.b.N.	26 00	W.b.S.	25 27
West	25 16	East	24 00	East	25 16	West	24 00
W.b.S.	23 36	E.b.N.	21 42	E.b.S.	23 36	W.b.N.	21 42
W.S.W.	20 51	E.N.E.	18 06	E.S.E.	20 51	W.N.W.	18 06
S.W.b.W.	17 10	N.E.b.E.	15 06	S.E.b.E.	17 10	N.W.b.W.	15 06
S.W.	12 36	N.E.	11 06	S.E.	12 36	N.W.	11 06
S.W.b.S.	7 30	N.E.b N.	6 40	S.E.b.S.	7 30	N.W.b.N.	6 40
S.S.W.	2 00	N.N.E.	2 06	S.S.E.	2 00	N.N.W.	2 06

[We have often related instances of the dangerous effects of local attraction, and if the foregoing narrow escape will not awaken the attention of the commanders of Merchant Shipping to the fatal risks they run from an inattention to it, we believe that nothing will do so, unless each of them, like the writer of the foregoing, has as narrow an escape as he had.---ED.]

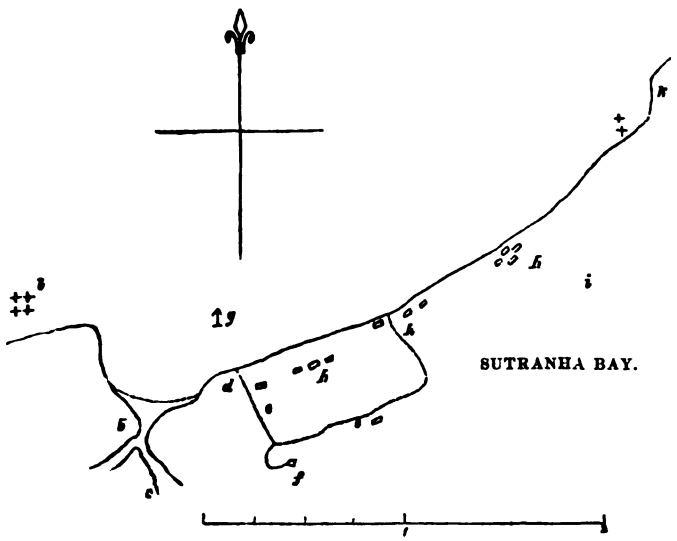
CHINA AND EAST INDIA NAVIGATION.—*New Dangers.*

Ship "Helen Stewart," off the Lizard, Nov. 18, 1844.

SIR.---Having touched at Sutranha, north coast of Timor, on our homeward passage from Shang-hai, I sounded round the ship while at anchor, as far as time permitted me, and drew up the accompanying plan of the bay. Our anchor was in 18 fathoms, mud, but when the ship swung in shore, with 45 fathoms cable out, we had only 6 fathoms under the stern.

When working up to Chusan, outside of Formosa, on the 17th Nov., 1843, at 4h. 30m. p.m. ship standing N.N.E., with an easterly wind, and heavy northerly swell, Kumi island bearing E. ½ S., about three leagues, we saw heavy breakers ahead and on the lee bow, extending from N.N.E. to N.N.W. distant four miles, and bore up to pass to lee-

ward of them. It appeared to be a dangerous shoal, extending E.b.N. and W.b.S., three miles, and bearing N.W.b.W., about 3 or 3½ leagues from Kumi, the sea broke continually on the middle part, but only occasionally on the extremes; the weather being dark and cloudy, with rain. It was too late to send a boat to sound.*



Latitude of anchorage, 9° 20′ S., longitude 124° 9′ E.; high water, full and change XI.; rise 12 feet, flood sets, N.E. 1½ knot per hour.

a, Sandy Point, low; *b*, wooded bank of a river, dry at low water to dotted line; *c*, woody swamp, *d*, fresh water ponds; *e*, path; *f*, Don Pedro's house; *g*, anchorage in 18 fathoms, mud gradually shoaling to beach; *h*, houses; *i*, limit of wood; *k*, bluff head; *l*, discoloured water.

There is a steep rock half a league to the southward of the south point of Koomisang, Loo-choo islands. The Amakirrima group appear to be composed of seven or eight islands, with several rocky islets, and rocks above water, and there were two single breakers, one about a mile, and the other a mile and a quarter south-east, from the south-west extreme of the group.

There are two trees, making like a sail on a small islet on the north extreme of the Helen shoal, which I made 8′ W. from Pulo Anna, or in 130° 55′ E., further east than the charts give it. At noon, July 16th, the two trees bore N.E., a sand patch N.E.b.E. ½ E., another E. ½ N., and and another E., and the south-west extreme of the shoal, E.S.E. two leagues. There was a ledge of low rocks along the edge of the shoal; water perfectly smooth inside.

We saw discoloured water, and the sea appeared ready to break between Amblaw and Bouro, (Banda Sea,) extending as far as we could

* In page 244 of our last vol. will be found another notice of this shoal.—Ed.

see from the north point of Amblaw. August 11, from 1h. 30m. p.m. to 2h. 30m. a.m., lat. 14° 10′, long. 106° 52′ E. to 105° 52′ E., we were running over a patch of milk-white water, had less wind and smoother water, than we had previously, but 60′.

Wishing you success with your useful mork,

I am, &c.,

J. F. WHITTINGHAM,

To the Editor, &c. *Master of ship "Helen Stewart."*

A SAILOR'S ADVICE TO HIS SON, *on entering the Royal Navy.*

ON returning to this subject (in accordance with the expressed wishes of our friends), as we have already observed, we are not insensible to the difficulties which lie in our way. Perhaps in the whole range of subjects which fall within the limits of our work, there is not one, on which such a variety of opinions prevail, as on that of the habits to be instilled into the mind of the embryo naval officer. We will venture to say, that there are few which are more important; for on these habits depend full oft the lives of many individuals. Excellence in his profession is the aim of every one when he embarks in life, and each strives to attain it by the road which he thinks best. That the course which we shall point out to the young sailor on his first adopting a profession, wherein he will find his morals beset with danger of every shape, should coincide with the opinions of all who may meet with it is too much to expect. But on the other hand we can safely assure him whom we now address, that if, in the trials which he will have to encounter, he observes the precepts which we shall lay down for his guidance, they will shield him from dangers that have been too often fatal to others, they will engender an early habit of self respect, they will secure for him the esteem of good men and will place him on that high road which leads to honour.

LETTER I.

MY DEAR CHARLES.—You are now entering into a world where trials and difficulties will beset you on every side in a profession to which I have devoted several years of my life, and in which your advancement will very materially depend on your own exertions. It is the profession however, which you have chosen of your own accord, and as I know from experience, that you will there meet with many allurements calculated to tempt your passions and to mislead your judgment, I shall commit to paper a few brief observations for your future guidance to which I hope you will pay attention. They shall be as concise and as clear as my abilities will permit, and I further assure you, that they will be dictated by an earnest desire to be useful to you, and the hope that, should it please God to continue your life, you may prove not only a good officer, but, in the course of time, a great man, and become a blessing and an ornament to your family, and every friend interested in your welfare. I shall class my remarks under separate subjects, so that, as occasion requires you, may refer to them singly.

Departure from home.

You must now quit that abode in which your infancy has been passed, you must be separated from those parents, whose tender affection has supplied all your youthful desires, and from those brothers and sisters who have been the

kind and disinterested partakers of all your past amusements. You will now have to struggle for yourself among strangers, who will not feel the same regard for your welfare; and I intend to present to you a faithful picture of your future society, that you may guard against those errors to which you will find yourself unavoidably exposed, that you may erect an impregnable barrier around your own virtue, and that you may acquire a love of those nobler dispositions with which you may hereafter associate.

I am sure that you will feel much regret at such a parting, and I do not deprecate the feeling; but it is now that the trial of that fortitude commences, which must sustain you hereafter under every reverse of fortune, which must arm you with patience in adversity, with moderation in prosperity, and with undeviating rectitude at all times. That fortitude must now be put to the test; let your mind therefore rest on the prospect of that honourable station in life for which you are going to prepare yourself; and, by looking into futurity, learn to anticipate the period when, improved in understanding, in knowledge, and in manliness of character, you will revisit those dear relations. The novelty which lies in the way to your ship will be amusing and instructive, if you make a proper use of it; and always remember, that every object which presents itself to your notice, however unimportant, will, in some way or other, afford you subject for useful enquiry.

Letter II.

Entry on board Discretion in forming immediate acquaintance.

The different course of life which it will now become your duty to adopt in every respect, cannot yet fully come within your contemplation. You will be best inured to it by experience. On introduction to your companions, be cautious how you form your acquaintance; and should there unfortunately be among them any whose general demeanour you disapprove, whose *language* or whose actions would be deemed criminal in the family which you have left, I desire you to avoid all intimacy with them. Be especially on your guard against any one, old or young, who may endeavour to insinuate himself into your good opinion by flattery, or by too forward a desire to serve you. Prefer always the blunt and honest expressions of him, who neither seeks nor shuns your friendship, until he knows whether you are deserving of his own. With him (although you may not entirely agree) mutual respect, confidence, esteem, and good offices, will reciprocally follow; while yielding to the first, might terminate in your being misled to a dereliction of your duty, cajoled out of your money and reputation, involved in excesses prejudicial to your health and peace of mind, and at last sneeringly deserted. Such is not an overcharged representation, I assure you, of the consequence of forming an early and indiscreet acquaintance. I have too often been a witness of it; and I know that few circumstances are calculated to have a more powerful influence on your future character, than the disposition of the first boy with whom you may form an intimacy. Instead therefore of forming those immediate friendships in the commencement of your career to which boys are so very partial, direct your attention immediately to the duties of your new station; they will comprehend a variety of requisite and amusing occupations; and when you are found to be steadily engaged in such appropriate pursuits, those who are as commendably employed, those whose exemplary and virtuous behaviour bespeak them as deserving of your acquaintance, will consider it an honour to enjoy your friendship.

(*To be continued.*)

Rodger's Anchors.

Packet Ship Hendrik Hudson, St. Katherine Docks, Jan. 6, 1845.

Dear Sir,—I have great pleasure in acquainting you that your Patent Anchor, supplied to this ship in September, 1843, was severely tried on the 25th ult., under the following circumstances:—

In working through the Needles Passage, against a strong easterly wind, it was found necessary to bring up for the night abreast of Hurst Castle; in getting under way, when the weather tide made, the anchor being tripped, a part of the gear of the windlass became deranged, which prevented the anchor being hove up; but, as the pilot assured me the ship was drifting over clean ground, although the tide was running about four knots, I allowed her to drift under her fore and mizen-top-sails until the windlass could be used.

It was soon evident, however, that the anchor was dragged over rocky, uneven bottom; and, when nearly abreast of Yarmouth, the ship was brought up, with a tremendous surge of the cable, which heeled her over three streaks, and brought her down forward two feet.

I assure you that, in the course of forty-two years' experience at sea, twenty-five of which in command in this line, during which I have crossed the Atlantic a hundred and fifty times, I have never seen an anchor so severely tested; nor do I believe that any other anchor that I have seen could have withstood such a sudden strain. It was evident that it had hooked a rock, and when it broke away, I concluded, of course, that I had lost my valuable anchor, and directed the mate to cut it, expecting that one, if not both, arms were gone; instead of which, I was greatly relieved and gratified by his report to me, that the anchor had sustained no other injury than the stock being much rubbed, especially near the ends, as if it had been tripped up by coming in contact with successive rocks; and I was afterwards informed by Wallis, a St. Helen's pilot, that there is a patch of foul rocky ground where this happened.

I have been particular in stating the above facts, from a conviction (which I trust will extend to every practical seaman) of the very superior strength of your anchor, and I am equally convinced, after trying it as a working anchor in all kinds of ground, that its holding qualities are in proportion to its great strength.

I may just mention, in conclusion, that the Hendrik Hudson is 821 tons burthen, and the anchor referred to is 29cwt. 3qrs. 7lb.; and, as it has done such good service, I heartily wish you every succes, and I hope sincerely that your long perseverance in improving our ground tackle may meet with the encouragement which it deserves.

I remain &c.

To Lieut. Rodger, R.N. GEORGE MOORE.

Peckham, Oct. 12th, 1844.

Dear Sir,—I beg to hand you an extract of a letter written to me by Mr. William Waters, Master of the brig Egham, dated Cadiz, 12th July 1844.

"We arrived here on the 9th inst. after a longer and more troublesome passage than usual (14 days.) We had a very tedious time down channel, with light contrary winds and calms, we were obliged to anchor frequently when the flood tide made against us, but it afforded an excellent opportunity of testing the good qualities of Lieut. Rodger's Kedge: the following are the particulars of two trials:—

"St. Catherines N.W. ¼ W., Bembridge Point N. ½ E., brought the vessel up in 2¼ fathoms, and veered out to 65 fathoms of stream hawser. Tide running by the log 2½ knots, and a light breeze from west.

"Friday 28th June,—Portland west end, N.N.W.; east end north. Let go the same kedge in 27 fathoms water and gave only 68 fathoms of hawser

Tide running 3 knots per log, with a light breeze from the westward; in neither instance did the kedge start that I could perceive, while vessels that did not anchor were drifted out of sight. I send you these particulars knowing that you take great interest in Lieut. Rodger's Small Palmed Anchors."

The Egham is 221 tons by the old, and 196 tons by the new admeasurement, and your kedge on being wayed by the "Queen's beam" in the London Dock, proved to be only 126 lbs. including the stock.

I leave these facts to speak for themselves.

I am Sir, &c.,

Lieut. W. Rodger, R.N. JOSEPH A. TURNER.

H.M.S. PHILOMEL.---Extract from a letter dated *Philomel*, Monte Video, May 21st, 1844.

WITH one exception we found all the soundings from the edge of the bank to the south-east of Cape St. Antonio to Point Indio, so correct that on entering the river ten days since having obtained a latitude and got into twelve fathoms to the south-east of Cape St. Antonio, I did not hesitate to run round the Cape and haul up for Point Indio in the night, although it was blowing one of the most furious storms (if not the most furious) I ever witnessed, the wind S.b.E. to south, with a tremendous sea, and so thick that even before dark we could not see a quarter of a mile, and a current setting strongly into the river. When past the Cape we hauled up under fore and main storm stay-sail and stood on till we were in 4½ fathoms to the south-east of Point Piedras, the soundings in the small chart being perfectly correct, for when after daylight we bore up under a foresail for Monte Video, taking her position entirely from the soundings we hit the mount exactly. We had generally about half a fathom more than the chart showed, that is, I allowed half a fathom considering the wind would cause a full river, and the lead gave about half a fathom more, which I supposed was caused by the sea, but on arriving at Monte Video we found the water at least a fathom above a mean river, thereby proving the correctness both of chart and lead. I never before felt the real value of Massey's lead, and particularly his hand-lead, for no man could have stood on the chains in such weather to sound, neither could he have given correct soundings, while Massey's hand-lead dropped from the stern gave it exactly.

It was a severe trial for a small vessel, for we ran free many hours in a tremendous sea (after hauling up for Cape St. Antonio) under a close-reefed fore-top-sail and double reefed fore-sail, with the wind and sea *three points abaft the beam*, yet she behaved beautifully, never shipping a drop of water or straining a rope yarn, and easier than I ever felt a vessel, though going from 11½ to 12 knots, and what is saying still more for her, after taking in the fore top-sail and going nearly as fast under fore-sail alone we *bent our cables* without shipping more water than the skupper carried off, and though we had the full ocean sea, it was only occasionally that she plunged her hawse-holes under: few of the old class flush vessels would I think have done it. We had never tried her in heavy weather at sea before, and she exceeded all our expectations, as I had always heard *Symondites* were very wet and uneasy; but even after we wore and were standing to the eastward, finding we did not draw off shore from the sea being on the bow, and very irregular, and also I suppose the current setting up the river, we set the double-reefed fore-sail, and a reefed main-try-sail, (though I feared neither canvass or geer would stand it long,) and forced her against the sea, when she drew off beautifully, she almost appeared to jump over the seas, yet never gave the slightest jerk, or shipped any water.

I must not forget to add that never having tried *Philomel* against another vessel, I was anxious to try with *Daphne* when she left Berkeley Sound, as she is said to be one of Symonds' finest vessels. In working out of the harbour in light winds, we beat her of course very much indeed, but the breeze coming strong from the northward, we ran back and rejoined her, and then ran down Berkeley Sound together under the same sail (a main-top-gallant-sail over whole topsails and courses) the wind from a point free to a beam, and in ten miles, to my great surprise, we beat her *a quarter of a mile*. But when we opened the sea more and met a little swell, in a run of four miles with the wind on the quarter, we increased our distance to *half a mile*. I certainly thought she would have beaten us running free at least. They said on board her that she was in her best trim, and we never having tried did not know our best, but we beat her just as she chanced to be at the time.

We were sorry to find *Gorgon* high and dry on the beach, as well as several merchant vessels. Had the bay been full, as usual in peaceable times, there must have been sad losses: such a storm and high river have not been known for thirty years. I am sure *Gorgon* going on shore has been caused by giving steamers such small chains. I remarked last year that her chains were not much larger than *Philomel's*. After parting one cable and slipping the other, which was coming home, being close to the rocks, they tried to steam off but could never get her head to the sea; the consequence was she merely went across the bay till they brought her up near Rat island with their last anchor, which was one of Rodger's, and which held beautifully, but the cable (chain) soon parted and with all the power of her engines working very well and with a main try-sail on her they could not keep her to the sea, and she went on shore broadside on in the bottom of the bay.

Hotham is sanguine about getting her off, and I think myself he will do so. She is seven feet in the sand and the tide does not flow much past her stern. Much will depend on another southerly gale and a high river, which is the only time she can possibly move.

I think if *Gorgon* had been supplied with the sized cables that Rodger recommends with his anchors, she would have been safe at her anchor now.

H.M. Steamer Gorgon, *Monte Video, Oct. 25th*, 1844—By this packet, I wish in a few lines to inform you of the *Gorgon* being afloat again. Great interest on the subject must be felt by naval men at home, though, perhaps, not so much as here, because few persons who have not seen her position, or who do not know the place, can form a correct idea of the immense labour, and the difficulties encountered in the five months that it has taken Captain Hotham, of incessant exertion to get that ship off. Under any circumstances it would not have been an easy matter, but when it is remembered that she was left *high and dry*, literally, (for they were able to walk round her,) and that she was two miles from water enough to float her while the ordinary rise of tide was only four feet, and that it has been necessarily accomplished with her *engines in*, and, moreover, that her captain had at first scarcely a person who thought he could get her off at all, the merit of the undertaking so successfully accomplished, may be, in some measure, estimated.

It would be to write a volume to detail all the works carried on,* but the main instruments made use of, were a mud machine, by which the sand and mud were dug away from around her, and a channel 10 feet deep at ordinary tides was formed for half a cable's length astern of her; and then placing under her camels, caissons, tanks and casks with a lifting power equal to nearly 500 tons, with a tide that rose to 10 ft. 6 at. the stern, and 8 feet at the stem, in

* We hope the *Nautical* will receive an account of these operations from kindly hand.—Ed. N.M.

the dock thus cut for the purpose, enabled the powerful purchases, applied to four anchors laid out, to move her a distance of half a cable's length on the 13th of this month. The difficulties he has had to overcome in doing this, which it takes so few words to describe, have been such as would have disheartened most men. Gales of wind have filled up his dock with sand as fast as it was dug, and damage has been received in all his other operations, which have repeatedly obliged him to commence afresh, the labour of weeks destroyed by one night's gale, or deluge of rain.

His energy and untiring determined perseverance are such as cannot be too highly praised, and no one has had so good an opportunity of witnessing this as I have, having had the satisfaction of seeing and appreciating all he did, and all he went through. He is now gradually heaving through the mud, and will in a few days, I hope be far enough out to get his masts and stores in; but it will take him full two months before he will be ready to leave this place. She will not reach England before the Spring. The damage she has received will, I think, be found wonderfully little. She must be built in first-rate style, as strong as iron, to be five months on the beach, and none the worse for it.

On Prevention of Dry-Rot in Timber.

Sir.—On the 1st inst. I inserted in the *Shipping and Mercantile Gazette* an advertisement to the following effect:—

"*Preservation of Timber.*—Introduce into the pores of timber (by means well known) a solution of sulphate or of muriate of iron. The solution may be in the proportion of about two pounds of the salt to four or five gallons of water.

"*London, Jan. 1st.* "Charles Toplis."

The object of the above brief notice in the form of an advertisement, was merely to afford me the ready means, should it at any time hereafter be desirable, of establishing the exact date of my publication of this process to the world; but I should not complete my intention, of being useful to society so far as this matter is concerned, were I to restrict my communication to so bare an enunciation. I have, therefore, now to beg the indulgence of your useful columns, to allow me to impart such further comments and observations on the proposed process as may seem necessary to me, to enable the community to make a more deliberate and full estimate of the nature of my suggestion; and if my conclusions be found correct, to take the fullest advantage of my communication. The Prevention of dry-rot is an object of too great moment to the shipping interest, to leave any doubt as to the propriety of making your paper the primary vehicle of the present disquisition.

It is altogether unnecessary in this place to dilate on the immeasurable importance to mankind of possessing the knowledge of some certain means of preventing the premature decay of timber. The recognised value of the acquisition has long instigated the labours and the cupidity of innumerable men to effect the discovery; the results of those efforts I will not stop to characterize.

It happens not unfrequently, as philosophers well know, that in the pursuit of means to obviate some very apparent evil, or to accomplish some projected good, men imperfectly instructed neglect to profit by the simplest and most perspicuous indications of Nature for the attainment of their object. Such I believe to have been the case with those who have busied themselves most in the search of artificial means for the prevention of dry-rot.

Almost every one is conversant with the character of Bog Oak, the durability of which is proverbial. Does not Nature herself in this very instance point out to us the all-sufficing means which we have so long and so vehemently sought? I confess freely that it is deep consideration of this one fact in Nature's laboratory which has led me to infer the efficacy of the process which I now submit for the trial, and, if successful, for the adoption of the world. But moreover, this same natural fact presents itself to my mind in strong corroboration of certain views which I have been led to form by long consideration of numerous chemical phenomena bearing upon the causes, and the means of obstruction, of spontaneous decomposition in devitalised organic matter. Throughout Nature, we percieve, that when animals or plants have ceased to live, the matter of their individual frames, under ordinary circumstances, takes on, sooner or later, a new series of molecular actions, entirely different from those which were incidental to the living being conducting to preservation; whilst the *post mortem* chemistry eventuates in the disintegration of the organic mass. This latter and destructive series results from the spontaneous play of affinities of the component elements among themselves and with surrounding matter, uncontrolled by the principle (if so we may call it) which had given vitality to the individual being. The decomposing process begins in the dead organic structure among those elements which were destined during life to be circulated in a fluid form, mainly for nutrition, through the vascular system of the animal or plant. These new spontaneous chemical changes, begun in the fluids, go on successively to involve those parts which are next in order of cohesiveness, and still soluble; parts which, during life, having originally been deposited from the fluids, have ceased to circulate; and then constitute the softer part of the organic structure. When these interstinal parts are destroyed by the decomposing process, it happens then, that to a greater or less extent, according to the generic organization, the cementing medium of the more solid and harder particles of the structure is broken down, and the whole organic mass is disintegrated. The destructive processes are analagous in the animal and in the vegetable kingdoms. Now, from ancient experience, and from universal practice, we know the certain means of arresting, for an indefinite period, the spontaneous decomposition of dead animal matter, the most prone to intestine destruction; and this certain and confirmed knowledge should give us assurance that we may, by correct investigation, attain like absolute power in controlling the natural liability to decay in dead vegetable structure; for their decomposing tendencies are involved in the same uniform laws of chemical action. We prevent the spontaneous destruction of dead animal matter, by the artificial introduction into the fluids of foreign elements, which establish a new order of chemical change, inducing, eventually, a permanent balance of affinities, which bars the disintegrating process that would otherwise involve the more solid parts of the organic structure. In this knowledge is our sure guide in the pursuit of analagous means for the prevention of decay in dead vegetable bodies.

The greater number of the published and much vaunted antidotes to dry rot, have been pure empiricisms; nostrums without one recognized principle of science for their stay, one claim to passing notice, but what could be inveigled from the unwary by the bluster and swagger of the audacious and ignorant quacks who wanted nothing but a market. There are others of these published remedies, which, from a certain apparent efficacy, and seeming conformity in their action with known laws, although perhaps put forth empirically by the projectors of them, demand the attention of enlightened inquirers, as holding out some promise of enabling us eventually to base our practice on the sound principles of well-understood laws of chemical action.

Established facts point out to us, that to prevent decay of devitalized organic structure, we must begin by changing the chemical constitution of those parts which are most prone in their natural condition to begin the destructive process. These parts are the natural fluids of the body, which hold in solu-

tion matters the most prompt to an interchange of elements, or to the exercise of affinities with surrounding matter. In many instances, sudden desiccation, as commonly happens in timber, may have suspended the spontaneous destructive action of the soluble matter of the body; which subsequent of water, under suitable temperature, will again allow to be brought into play. The well known effective interponents to the spontaneous decomposition of dead animal matter, are, for the most part, taken from that class of compound bodies which are by chemists denominated salts, bodies consisting of an acid or of chlorine combined in a chrystalline form, with definite proportions of an alcaline, earthy, or metallic base. Now it is not difficult to frame to ourselves an approximative rationale of the antiseptive process of such agents. One or other of the component elements of the effective salt, having a powerful affinity for some of the elementary matter of the organic fluid, enters into a combination with it, which deranges or destroys the original tendency to that peculiar series of molecular interchange, which leads, as I have shown briefly, to the final disintegration of organic substance. In some of these cases, we have physical demonstration that the base of the salt has formed by strong affinity a permanent compound with the more solid matter, as the ligneous fibre, for instance, of the organic mass; which new formation we may presume to be capable of resisting decomposition by the play of feebler affinities occurring naturally among the original elements of the body. Here we have appreciable, nay obtrusive facts to guide us to a profitable investigation of this exceedingly involved system of destructive chemical agencies; for we have made it apparent to our senses what has been the nature of the chemical change, wrought in the preserved fibre by our artificial interponent.

The more successful antidotes to dry rot which have been tried, like the known antiseptics to the decomposition of animal matter, have been taken from the class of binary compound salts, the bases of which are some alcaline, some metallic. In the actual state of our knowledge, perhaps it is impossiple to say absolutely, which of the two elements of the salt is the efficient agent in superseding the destructive action. From many experiments which I have made, in which I have found a new and durable combination to have been formed between the fibre of the preserved structure and the earthy or metallic base of the salt employed; my present inclination is to the belief, that we must ascribe the effect more to the base than to the acid of the salt. And I am strengthened in this belief by the knowledge, that the new combinations which might result from an union between the acids or the chlorine of the salts used, and any of the elements of the organic compound, would be almost universally soluble in water, and thence easily removable by the subsequent affusion of water, and consequently only temporary and casual in their preservative efficacy.

Reasoning then on facts which are already well established, and guided by analogy in the experiments which I have just instituted, I have come to the conclusion, that we may possess ourselves of the certain and infallible means of preventing those secret intestine chemical actions which issued in the destructive dry rot of timber.

Taking the Black Oak of the Bogs, which has endured through ages beyond the memory, the tradition, or even the records of man, as a specimen of timber which has been rescued from the common fate of spontaneous decay by the adventitious circumstances to which it has been exposed; I ask myself, what is the accidental peculiarity of this mass of timber, which seems to have taken it out of the destructive range of chemical action, incidental to all organic structures? Its obvious characters answer me on a first glance—this piece of oak has been in contact with some salt of iron, for its black colour indicates the well known union of the Gallic acid with an iron oxide. Here is a proof open to the senses, that a portion of the matter which entered originally into the circulating fluids of this particular tree, has formed a casual combination with adventitious foreign matter, by which even the fibre has

changed its visible qualities; and the solid structure of this identical mass of timber has come down to us entire and unshaken in the coherency of its parts, from a period so remote that we have no vestige of its date. And more than this; we find that when we take this black oak from its ancient bed of sepulture, and fashion it to our present uses, it seems to be endowed with a perennial existence; it stands before our eyes in its artificial forms through generation after generation, unchanged, and seemingly unchangeable! Contemplating these facts, it is unphilosophical to conclude that the oak has derived such preternatural durability, such seeming immunity from decay, from the casual chemical action of the foreign matter to which it has so obviously been exposed? Others will answer for themselves. My present conviction is, that the black oak is indebted for its extraordinary preservation, to its accidental contact in the bog with a solution of sulphate of iron. Assuming it to be so, we can readily and cheaply imitate this accident of nature, and why should we not do so? Since we have an apparent guarantee by this simple process, for the solution of the long-vexed problem, the artificial prevention of premature decay in the timber of our ships and buildings.

My reason for recommending a solution of the sulphate of iron for the preservation of timber is, that from the general distribution over the superficial crust of the earth of pyrites or sulphuret of iron, the natural source of the sulphate, I see every reason to believe that this widely diffused salt of iron has been the agent of change in the bog oak. In alluding to the muriate, or chloride of iron, I merely wished to afford to others a suggestion for trying whether the preservative effect be in any degree influenced by the kind of acid or by the chlorine. My own impression is, from such experiments as I have made, that the artificial durability arises from the permanent combination of the ligneous fibre with the metallic oxide of the salt. It may be necessary to observe to such as are not conversant with chemistry, that iron indicates its combination with the gallic acid by blackness; but that its oxide, or its carbonate enters into permanent union with the vegetable fibre, without the intervention of the peculiar acid of the oak.

Such are the facts, such is a brief outline of the reasoning on which I found my recommendation of the sulphate of iron for the preservation of timber. Unless I could have satisfied myself of the almost certainty of accomplishing this immense economical achievement, the preservation of timber at little cost, for green vitriol is one of the cheapest of chemical produces, I should have felt no inducement to obtrude my personal views and experience on an important subject, upon the attention of the world. Having been led by the train of my pursuits into the acquisition of a certain kind of knowledge which bears upon a question of vast moment to society, I communicate freely the results of my investigations, from a conviction that if they be at all pertinent to their object, to be extensively useful, the deduced process must be placed at the command of all whom it might serve, unimpeded by individual pretensions, and unincumbered by monopoly interests.

To any one, if such there may be, who shall be disposed to impugn my facts, or to question my inferences, I can only answer—

——si quid novisti rectius istis,
Candidus, imperte: si non, his utere mecum.

I am, &c.,

London, Jan. 2, 1845. CHARLES TOPLIS.

[We have copied the foregoing from the *Shipping Gazette* sent to us; and should be glad to know what Messrs. Payne and Loder are about?---ED.N.M.]

THE SWORD FISH.—Malta, Dec. 17.—The Susan Cousins of London, left this port on the 23rd of November for Alexandria, in ballast. When at a distance of 250 miles from this port, she fell in with boisterous weather and

strong gales. After the second day, the wind became more moderate, and to the astonishment of the master and crew, the vessel suddenly sprung a leak, so much so, that it took both pumps to keep her free, in consequence of which they bore away for Malta. On arriving here, finding that she continued to make the same water, the master lost no time in heaving her down, to ascertain the real cause. On the larboard side nothing was discovered, but on heaving her down on the starboard side, in the larboard run in the third plank, from the garboard streak, twelve feet from the stern-post was found the remains (9 inches long) of the pointed rostrum of the sword-fish, or Xiphias, which had entered in a slanting direction, and struck the edge of a timber, which, fortunately for the crew, broke short off. The piece was taken out of the plank, under the eye of Mr. Cammillari, shipbuilder of this place, and was witnessed by numerous spectators. It is now at the office of the *Malta Times* for the inspection of the curious, having been kindly forwarded to us by Mr. Cunningham, at the request of Mr. Cousins.

The Caroline, M'Cormick, which sailed from hence Dec. 9, for Falmouth, put back 10th.—*Malta Times.*

Wreck of the Crusader.—In the month of November, 1843, the Crusader left Quebec, bound to England, and proceeded in safety until below the island of Anticosti, in the Gulf of St. Lawrence, when in a snow storm she became entangled amongst the rocks, on the main land, and was wrecked. The crew took to their boats, and some of them made the land to the westward of the wreck, where they were afterwards found frozen to death on one of the islands of that coast, which is rendered desolate by the impolitic charter of the Hudson Bay Company,* which charter entitles the company to the exclusive possession of that coast; in consequence it remains uninhabited. Had these men been better informed, and fortunately pulled eastward instead of westward, they would have reached that part of the coast not subject to the Hudson Bay Company, and their lives would, in all probability, have been safe, for at every five or ten miles† they would not have met a house or hamlet open for their reception, where they would have been received hospitably by a family speaking their own language.

From the river Saguenay to Mecatina, the Hudson Bay Company's coast, a distance of nearly nine degrees of longitude, there are houses only at intervals of 100 to 150 miles; from Mecatina to Groswater, or Esquimax Bay, along the free coast of Labrador, there are houses at every ten miles, on an average. Were the coast now under the Hudson Bay Company thrown open to the public, it would not be many years—nay, not many months—before it would be equally closely inhabited.

But it does not answer the purpose of the Hudson Bay Company to encourage any other inhabitants than Indians and their own servants.

A Canadian Resident cognizant of the Facts.

For the benefit of those navigating the St. Lawrence and Straits of Belle Isle, I submit the following memoranda regarding the occupation of the coast east of Cape Whittle. The distance from Cape Whittle to

* This is nonsense or worse. See pages 139, 172, and 173 of Bayfield's St. Lawrence, for nature of this coast and climate, and it will be found that it cannot be made more desolate than nature has made it already.—Ed.

† The mistake of the press has made the statement correct, for they certainly would *not* have met either house or hamlet, every five or ten miles.—Ed.

	Great Mecattina .	is	8	leagues, inhabited at each 2 or 3
thence to	St, Augustin . . .	is	7	" every league
"	Bradore	is	16	" every 2 do.
"	Blanc Sablons .	is	2½	" every mile
"	Forteau Bay . .	is	4	" every league
"	L'Ance Aux Loups	is	2	" every league
"	Great Nat . . .	is	3	none
"	Red Bay	is	4	only at Carlscroe
"	Black Bay . . .	is	3	none
"	Chateaux Bay . .	is	6	none
"	Henley	is	1	none

At each of the places named there are inhabitants all the year round; and at many of them supplies for vessels could be procured, as well as small spars and other fittings in case of necessity.

[We have copied the foregoing from the *Shipping Gazette*, and the following are the remarks of Captain Bayfield on it, whose experience in the survey of the St. Lawrence, gives weight to them.—Ed.]

The statements in the article which you have sent me from the *Shipping Gazette* comprise as many *inaccuracies* as it is well possible to cram into the space. It seems to be a most illiberal attack upon the Hudson Bay Company by some Canadian who I suppose has no friendly feeling towards the English Company.

The idea of that Company making a country desolate which is composed of barren granite rocks, bogs, ponds, and bush swamps, covered with snow and ice from October to June, and with cold dense fogs for three-fourths of the remainder of the year, and when the mean annual temperature is the freezing point, is equally false and ridiculous.

The statement of the comparative number of houses eastward and westward of Mecattina is false, as see the following list:—

Tadousse in the end of the Saguenay, Port Neuf, Jeremy Island, Good Bout River, Pt. De Monts light-house, and Seven Islands *are all permanent trading posts* except the light-house.

River Morsic, Seal House Cove, Cape Cormorant, River St. John, *all log houses occupied during the fishing season.*

Mingin, Hudson Bay Company's post.

Nabeesippi River, Natashquam River, Kegashke River, Musquarro River, Wash-she-cootai, and Olemanoshebo, are the Hudson Bay Company's trading and fishing posts.

Coacoacho Bay, *occasionally occupied.*

Etamamu, Hudson Bay Company.

Walagheistie Sound, and Boussier Bay, Canadian hunters and fishers.

Natagamu, in the fishing season.

Little Mecattina and Great Mecattina.

Now all the foregoing are to the westward of Mecattina, and between it and the Saguenay. So you may judge of the truth of the statements in the article from the *Shipping Gazette*.

H. B.

Navigation.—It is gratifying to be enabled to state that the "Society of Merchant Venturers" have established in Bristol a school, where navigation will be taught "free of any expense whatever", three days in the week, Monday, Wednesday, and Friday, from 9 a.m. to 1 p.m.; application to be made to the Treasurer of the Society, William Claxton, Esq. We congratulate the profession on this liberal display of the Merchant Venturers of Bristol, and trust that the example will be followed by the ship-owners of other ports.

PIRATES AT PATRAS.—The *Times* of January 2nd, contains a communication from Athens, dated December 20th, 1844, from which we take the following extract to show that the buccaneering in the Grecian Seas, which was so much the fashion last year, is still the fashion in 1845.

"Brigandage continues on the increase, although the Government has just published an amnesty to several old brigands, and *close to Patras a vessel was attacked, having property on board belonging to an Englishman, established at Patras, named Ingott*, whose clerk was severely wounded in the scuffle that took place; a vessel appearing from Galaxidi obliged the pirates to make off. The Chamber of Commerce at Patras has petitioned Government to take proper measures to prevent any similar acts in future."

NAUTICAL NOTICES.

MELVILL SHOAL, *Strait of Sunda.*—We find the following in the *Cape Gazette* of the 22nd Nov. last.

H.M.S. Philomel, Simons Bay, Nov. 15th, 1844.

SIR.—I have the honor to send you the bearings and distance of a small coral shoal which does not appear in our chart, nor is mention made of it in Horsburgh. It lies directly in the fair way.

Shoal near the Button in the Straits of Sunda. The bearings by very accurate observation furnished by Lieut. Melvill, of His Netherland Majesty's Navy, and attached to the Hydrographic Office, Batavia, are as following:

N. 234°W. from Button, N. 27½° E. from the south point of Thwart-the-Way, and N. 52° E. from the north point of the same island.

From the shoal, the most southerly point of Tulphin Island was just on with the most northern point of Pulo Bessy.

This very small Coral shoal has only 2¼ fathoms on the shoalest part, and near around it 12 and 16 fathoms. The distance to the Button is nearly 1½ mile.

I have &c.,

PHIL. JUSTICE, *Commander.*

Rear Admiral the Hon. J. Percy, C.B., Commander in Chief, Cape of Good Hope.

Singapore, Oct. 19, 1844.

PULO LOZIN, *Gulf of Siam.*—SIR, I beg to offer you a few remarks on the position of the Pulo Lozins which have so long lain in obscurity and doubt, and which for the information of my nautical brethren I trust you will publish.

On my passage from Siam to this place, October, 2nd 1844, saw from the deck at 8 A.M. a small rock bearing S.E.b.S. ½ S., and another considerably higher and more extensive bearing S.W.b.S. ½ S., which must be the two Pulo Lozins or Cosyns which are mentioned in a foot note in the 3d Ed. Vol. 2nd. p. 257 of Horsburgh's India Directory as seen by the Formosa in 1679. Same time tacked ship and sounded in 29 fathoms, mud bottom. At 9 A.M. lost sight of the west rock, at noon the east rock bore S. ¾ W., distant about two miles, sounded in 29¾ fathoms, same bottom; latitude observed at noon 7° 19′ 30″ N., long. carried on from its bearing at 8 A.M. when sights were taken for the chronometers, together with its bearing and estimated distance at noon places this dangerous rock in lat. 7° 17′ 30″ N., long. 101° 59′ 45″ E. of Greenwich, or 1° 25′ 30″ east of the entrance of Siam river which I found

by many observations taken during my seventy days stay there to be in long. 100° 34′ 15″. The rock above alluded to is of small size, considerably less than Pedra Branca which lays in the eastern entrance at Singapore Strait, and may be seen from the deck in clear weather about 6 or 7 miles off.

I am sorry that circumstances prevented me from ascertaining the true position of the west rock, but I would suppose it bore from the former about W.b.S. distance about twelve or fourteen miles. This however is mere conjecture, although it cannot be far from the truth. The position of the east rock may be firmly relied on, as I had many opportunities of proving the rates of my chronometers at Siam, which did not differ any from that found by the Time ball at Bombay in May last, and which was subsequently proved by the longitude of the numerous islands on the Malay coast as laid down by Horsburgh and confirmed by others. If you think this information of sufficient importance, please send a copy to the Editor of the *Nautical Magazine*.

I remain Sir, &c.,

THOMAS CLARK,

Commander Ship William Gillies.

To the Editor of the Singapore Free Press.

[The Editor of the *Singapore Free Press* has our best thanks for attending to the wishes of the Commander of the William Gillies in transmitting the above to the Ed. *N.M.*]

Countess of Durham, March 23rd, 1844.

ALLOA STRAITS.---If bound to China by the eastern passage and intending to pass through Alloa Straits, the Straits will be easily known, Lomblen on the west, and Pantar on the east side which form the Straits. Lomblen is easily known from the other island westward. There is a very high mountain on the south-west end and the land continues mountainous to the eastward, and when it turns to the northward it becomes much lower and continues so to the north-west end where there is another mountain. The east point is low with a white sandy beach and trees on it. Middle island can be seen 25 miles off, appears like a gunner's quoin on the west end, but when you approach it you will see a long low point on the south side and a short distance off a round rock apparently connected by a reef. Horsburgh says two islands, but there are three, a low island bearing east from Middle island 3 miles and south of East island with reefs lying from half to one mile. (A channel appears to be between it and East island.)

East island is a level island and moderately high from 2 to 3 miles of Pantar, the west end falls suddenly off to a low point with cocoa-nut trees on it. The channel between Lomblen and Middle island is the best. You will have the tides more regular (they run very rapid here) and you will have better command of the ship. But if you go between Middle island and Low island keep within half to a quarter of a mile of the beach of Middle island, where the tide running to southward is not so strong, and farther off the vessel is yawed about by the irregular tide. I saw no danger on the north side close to the beach. Could get no soundings at 60 fathoms of line two cable's length of the beach. On the north-west point there are some small rocks at the waters' edge on the beach. There is a village on Lomblen shore abreast of Middle island.

Pantar has a high mountain on the south-west end and a deep bay runs to the north-east in the shape of a horse shoe, and two small islands appear at the bottom of the bay. A reef stretches off from the north point which forms the bay.

To the Editor, &c., D. SPITTALL.

OSPREY SHOAL, *Approaches to Torres Straits.*---Extract of a letter from Captain Blackwood, to the Hydrographer of the Admiralty, dated *H.M.S Fly, Torres Straits, July 20th*, 1844.

"I beg to inform you of the discovery of a reef in this part of the world, which has not yet obtained a place in any of our charts, and as it is important to the safety of ships steering for Torres Straits by the "outer passage" that it should be forthwith given publicity to, I beg you will be so good as to publish the following account of its discovery and position."

"July 14th, three masted schooner "Osprey," Hunt, master, from Hobarton to Manila, states that he fell in with it in lat. 13° 50′ S., long. 146° 57′ E.

"July 19th, brig "Margaret", Keene, master, from Sydney bound to Manila, gives it a position of 13° 57′ S., long. 146° 34′ E., the latter position (having examined the observations of both vessels which you will perceive very nearly agree), I believe to be nearest the truth, as the Margaret appears to have passed the ledge at a distance of three miles or less.

Its position therefore I conceive to be in 13° 57′ S., lat. 146° 36′ E. long. (south extreme of reef) and to run in a N.N.W. direction for 9 or 10 miles.

I am, &c.,

F. P. BLACKWOOD.

Trinity-House, Jan. 16, 1845.

SHIPWASH SAND.---Notice is hereby given, that this Corporation is about, to cause a Spiral Beacon Buoy of large dimensions to be moored experimentally near to the south end of the Shipwash Sand, off the coast of Suffolk.

This buoy, which will be colored black and white, in horizontal stripes, and surmounted by a black ball, will be moored at a short distance S.W. from the present white buoy, and the said white buoy will also remain at the station until further notice.

By Order, J. HERBERT, *Secretary.*

PANAGATAN SHOAL, *Mindoro Sea.---The Asia and the loss of the Marquess Camden.*

In November 1839 these two vessels then on their voyage from Singapore to China met at sea, and the Captains agreed to keep together to be of mutual assistance in case of need. On the night of the 7th of December being off the Philippine islands they separated in a storm, but regained sight of each other two days after. On the morning of the 12th Captain Desse who was a long way ahead of the other vessel perceived signals of distress on board of her, and immediately returned and anchored close to her when he found she had run on a coral reef in the night.

During the three succeeding days, Captain Desse and his crew, used every means in their power to assist in extricating the Marquess Camden, but failing, it was resolved to save the most valuable part of the cargo, and 200 chests of opium were conveyed to the Asia.

On the 16th the Asia being in danger of sharing the fate of the Camden owing to the weather, embarked the whole of the Camden's crew consisting of 112 persons, and landed 108 of them at Manila and the rest at China. The Spaniards call this reef the "Bajo de Panagatan" in the Mindoro Sea; but it does not appear in Horsburgh's chart. It is in lat. 11° 50′ N., long. 121° 22′ E.

We understand Captain Desse will be rewarded by his own Government, and we are quite sure that the parties concerned in the Camden will not be slow to acknowledge his services.

Edwards' Patent Preserved Potato.

We have frequently taken occasion to draw the attention of our Nautical friends to this proved valuable article of food, and we feel gratified in perceiving, on reference to our advertising columns, that our opinion of it is in coincidence with that of Sir William Burnett, the Director-General of the Medical Department of the Navy. That distinguished authority says in his letter to the Patentees:---"*I am perfectly satisfied that your Prepared Potato forms a desirable addition to the usual diet at sea.*" This expression of Sir William Burnett's confidence in the merits of this valuable invention, coupled with the numerous Government Special Reports, and Testimonials in its favor from every part of the world, by men of high distinction in the United Service, as well as the more respectable of the Mercantile marine, must convince the most sceptical that Edwards' Patent Potato, whether considered as a vegetable diet, possessing strong antiscorbutic and health bestowing properties, retaining, uninjured by time and climate, its nutritious and palatable qualities, or in its great economy, portability, and general usefulness, is an article that all sea-going people should be provided with, as well as those at stations, and colonies, where the potato, the most valuable of all vegetables is not obtainable.---Ed. *N.M.*

Royal Southern Yacht Club, Southampton.

The Royal Yacht Squadron of Cowes was founded in 1815, the Royal Western Yacht Squadron of Plymouth in 1827, and the Royal Southern Yacht Club of Southampton in 1838. These three societies have each a club-house. The vessels of the Cowes club wear the *white* ensign of H.M. fleet; those of the Plymouth club the *blue* ensign; and those of the Southampton club, 36 sail, also the *blue* ensign; but having in the last instance in the fly of these colours the Southampton Arms. It will be recollected that the Thames Yacht Club likewise wear the *blue* ensign, with the addition of a crown in the fly, and that the *red* ensign is so far out of favour as to be hoisted by the Cork Club only, while the *white* ensign is solely used by the club at Cowes. In the English Channel there are three distinct squadrons viz. the Cowes, Southampton, and the Plymouth, flanked to the eastward by the amateur blue jackets of old Father Thames, and of Harwich; and to the westward by the sons of Hibernia. Ever remembering all of these aquatic clubs, but noticing each only in its turn, proceed we now to give a list of the yachts of the Royal Southern or Southampton Club. The Plymouth and Cowes divisions are already given in the *Nautical* for August and September 1844. And some account of the "time-honored" Cork Club appears in our number for January in the present year.

In the Cowes Club no yacht is admissible under thirty tons *old* measurement, a circumstance which somewhat favours the adjacent Southampton fraternity, by gaining them a few vessels whose owners might, were the rule otherwise, aspire to the white ensign and the *locale* of the Medina river. In the Plymouth Club no yacht is admissible under ten tons, *old* measurement, and even *this* restriction does not exist at Southampton (or in the Royal Thames Yacht Club*) so that it may well be expected nearly all the small yachts *in the*

* In reading the newspaper accounts of the great number of Yachts in the Royal Thames Yacht Club, (one hundred or more,) it must be borne in mind, that apparently, no craft is too *small* to be added to this river squadron; since we find in its lists, boats of even *four tons*! viz. the *Mab* cutter, Lord De Ros, owner, and again, still *under ten tons*, the Andromeda, Ann, Bermudian Maid, Brilliant, Briton, Dauntless, Forest Fly, Girl, Iris, Little Vixen, Nonpareil, Pet, Sylph, Teal Wild Duck, &c., Surely these should be called *boats*, not *yachts*. The Thames Club might reject all vessels under ten tons. The Arundel is better suited for such dwarfs.

Channel will by and bye swell the list of the Royal Southern Club, which may also fairly reckon on a sprinkling of larger craft as at present.

The following list is corrected to January 1845.

Vessels.	Tons.	Owners.
Flower of Yarrow	183	Marq. Conyngham, (Commodore)
Elizabeth	35	R. Wright, Esq. (Vice Commodore)
Breeze	55	T. Legh, Esq. (Rear Commodore)
Little Vixen	9	R. Wright, Esq.
Mazeppa	14	C. Bromley, Esq.
Rantipole	20	J. M. Ensor, Esq.
Osprey	126	J. Greeves, Esq.
Sea Nymph	10	C. Wheeler, Esq.
Giraffe	5	G. Colson, Esq.
Falcon	12	W. Westlake, Esq.
Columbine	90	S. Barry, Esq.
Sylph	8	G. Hunt, Esq.
Liz	10	W Stovin, Esq.
Ganymede	70	J. H. Smyth Pigott Esq
Julia	44	E. N. Kendall, Esq.
Acme	5	E. Coxwell, Esq.
Jilt	18	J. T. Groves, Esq.
Whim	49	C. Brett, Esq.
Claude	30	Lord Alfred Paget
Lady Louisa	15	J. C. D. Coane, Esq.
Mystery	25	Viscount Seaham
Kate	94	R. Bell, Esq.
Termagant	15	R. Wright, Esq.
Medina	44	A. J. Hambrough, Esq
Coral	18	M. King, Esq.
Vectis	17	R. A. Mangin, Esq.
Menora	17	J. H. O'Shea, Esq.
Water Witch	8	H. Lury, Esq.
Don Juan	8	T. Cooper, Esq.
Pet	10	H. S. Ingram, Esq.
Iris	75	T. W. Fleming, Esq.
Clutha	24	T. Birchall, Esq.
Phantom	20	A. O. Wilkinson, Esq.
Nora	26	C. B. Blaydes, Esq.
Fairy	7	E. Coxwell, Esq.
Comet	8	W. Stovin, Esq.

WELLINGTON AND SOPHIA ELIZA.—The following are the particulars of the collision of the bark Wellington, Captain Jas. Liddell, and the Sophia and Eliza, Captain Dickens:—

Between 12 and 1 o'clock on the morning of the 8th October, in lat. 18° S. long. 27° W., we were awoke by a violent crash, and immediately afterwards heard Captain Liddell's stentorian voice, giving various directions, from which we had no doubt that a serious accident had occurred. It soon appeared that we had come in contact with another vessel, which proved to be the Sophia and Eliza, Captain Dickens, an American bark of 207 tons burthen, from Stonington, bound on a whaling voyage. The wind being foul, the vessels were on opposite tacks, and the night being very dark, they were not seen until close to each other, but on the alarm being given of a "vessel on the lee-bow," our helm was put hard down with the speed of light, which broke the force of the concussion. She struck us, fortunately, on the bluff or curve of the lee bow; had the blow been received amidships, or among the fore chains, or more aft, or, indeed in any other place whatever, it is not improbable that both vessels might have foundered, but the American bark assuredly. On speaking her, we found that she expected to become a wreck, and a short time afterwards, a boat from her put off to us, and the mate stated that she was taking in two butts of water at every pitch, and added with anxiety, that they hardly expected she would hold together till day break. Captain Liddell promised to keep near her all night, and as she had four whale boats, there was no immediate danger. Captain Liddell wore our vessel, and bore down closer to the bark, and again hove to. At dawn of day, our chief officer, Mr. Benney, and the carpenter, went on board, and after a careful survey of the injuries, reported the speedy abandonment of the vessel inevitable. The shock from our heavy ship had disturbed almost every timber from stem to stern; the frame was shaken, and the deck loosened; her bowsprit, the head of the fore mast, fore yard, and other spars were carried away, and the larboard-bow stove in, leaving a clear breach for the sea. The captain, officers, and crew, 26 in number, hastily got together their clothes and chests, and in their whale boats bade a sorrowful adieu to their poor disabled bark, and found a hospitable refuge in the Wellington.

Before leaving, however, they set fire to the vessel, (a step which met with Captain Liddell's entire concurrence,) for had she been left to roam in those latitudes, she might have been fatal to other vessels in the dark. Soon after Captain Dickens and our chief officer finally abandoned her, we saw the unfortunate whaler enveloped in flames, the wind, which had now greatly increased, spreading the devouring element with awful rapidity; in about a

quarter of an hour, the main and mizen-mast fell upon the deck, one mass of flame, and the rest of the upper works continued to burn, while she was visible to us. Most providentially not the slightest personal accident or injury occurred. It is stated, that at the moment of the concussion, a man was on the American's royal yard, furling the sail, and that he was pitched into the rigging, and escaped unhurt.

Captain Liddell's conduct throughout these painful scenes was most exemplary, every way worthy as a commander and a man. He exhibited great coolness and presence of mind in giving orders, combined with the most anxious benevolence and sympathy for the sufferers, all his care and apprehension indeed seemed centered in them. Ready for every nautical exigency, and anticipating with singular humanity, every want of the wrecked, his conduct merits warmer, and more substantial testimony than these feeble lines can impart.

Early in the morning, we saw a large ship about eight miles distant. Our situation, lying-to, and that of the American bark disabled and in distress, must have been seen by her, and we expected that she would approach us, but no, unlike the good Samaritan, she passed by on the other side. It is to be hoped, if ever *her* Captain should encounter similar peril, that he may receive that measure of aid and sympathy which he, apparently, denied to a brother sailor in distress.

The writer feels that he ought not to conclude, without recording on his own behalf, and that of the passengers, officers, and crews of the two vessels, their humble thanks to Almighty God for this signal instance of merciful deliverance, under circumstances of the most urgent peril of shipwreck, truly doth the Psalmist say,—"They that go down to the sea in ships, that do business in great waters, these see the works of the Lord, and his wonder in the deep."

Consulate of the United States,
Cape Town, Oct. 29th, 1844.

Captain Dickens, of the unfortunate American bark "Sophia and Eliza," has desired the undersigned to return his sincere thanks, and the thanks of his Officers and crew, to Captain Liddell, as well as to the Officers and passengers of the Wellington, for the universal, constant, and very kind attentions and humane treatment which they have received on board the Wellington, since their providential escape from their sinking ship.

ISAAC CHASE, U. S. C.

CROMER.---The encroachments of the ocean at this place have called forth the repeated ingenuity of the public, and of experienced men to prevent further ravages. For centuries the lofty cliffs and adjacent residences have been, bit by bit, toppling into the dashing waves below, till cliff after cliff, acre after acre, dwelling after dwelling, has disappeared, which in the time of Henry IV. might be seen half a mile from the shore. Subsequently in 1611, 1789, 1825, 1832, and 1837 large slips have taken place. In 1839 a safety wall was erected by subscription for the defence of the place, which, it was said would be impervious to the ocean waves.

For this persons who had property near the cliff were rated to the amount of 20s. in the pound, but we regret to add that, during the past week, another large shoot of this wall has taken place, to the extent of twenty or thirty yards, and which chiefly, if not entirely abuts on the property of Mrs. Rust, on the right over the jetty. It is not entirely the operation of the ever-restless ocean that renders these barriers unavailing, but the land springs are continually in operation to loosen any such protective wall. The inhabitants, we are told, are much alarmed, especially as next (this) week are spring tides. It has been thought that breakwaters would be the most effectual protection to the property in that neighbourhood, at least so far as the sea is concerned, and we are surprised that they should not have been tried, especially as the expense is of a comparatively trifling amount.—*Bury Post.*

THE PRECURSOR STEAMER.—We have been kindly favored with the following by one of the passengers:

The Precursor left Southampton at four o'clock on the evening of the 10th September, and arrived at Cadiz, after being hove to four hours, at seven o'clock, on the morning of the 16th September. We shouldered anchor and left Cadiz at 6 a. m. on the 19th September, and arrived at Bona Vista, after being hove to three hours, at 11 a. m. on the 26th September. Left the latter place at eight a.m. on the 3rd October, and steamed for the Cape of Good Hope, off which, we arrived on the evening of the 24th inst., but owing to the weather being very hazy, it was deemed expedient to remain outside until it cleared off, and we therefore could not anchor in Table Bay before the evening of the 25th inst.; so that we have been under steam 34 days 5 hours, detained at ports, coaling, &c., 9 days 21 hours; hove to 23 hours; the sum of the whole being 45 days 1 hour.

The steamer encountered a very heavy monsoon for 12 or 13 days, the wind blowing dead against her, however she proved herself a good boat, and behaved extremely well. We are all very comfortable on board; Capt. Harris appears desirous of doing everything in his power to make us happy; the accomodation is good, and the table first rate.

The brig Nine, from Newcastle to Ichaboe, was totally lost on the 20th September, on the Hartwell reef, off Bona Vista; fortunately the officers and crew were all saved. This accident adds another to the large list of wrecks that have taken place on this reef.—*Zuid Afrikaan.*

THE GREAT BRITAIN STEAM SHIP.---Thursday 24th being appointed for the sailing of the Great Britain from Bristol on her voyage to London, she got under way at seven o'clock; but upon the anchor being lifted, it was found that it had fouled with the wreck of the Nora Creina schooner, run down about six weeks since in Kingroad, a portion of the spars and rigging of which it brought up. Some delay in consequence ensued, and she went down at a reduced speed, and was abreast the Flat Holm at 40 minutes past 9 p.m., when the ship was put at an increased speed, the engines making 14 revolutions per minute, the steam pressure being 4½lb. to the square inch. At 5 minutes past 10 o'clock she slackened speed to adjust the bearings, and the vessel was kept at a reduced speed, until about midnight, by which time she was off the Nash Lights. When she got under way at Kingroad, it was blowing fresh from the S.S.W., which at 3 o'clock a.m., on Friday, had veered to the N.W., and increased to a gale with a heavy cross sea, with squalls of rain during the night.

It is scarcely possible for a vessel to have had a more favourable opportunity of testing her powers and capabilities than the Great Britain had during the continuance of this gale, while on her passage from the Holms to the Lands End, during the whole of which period the gale blew so strongly, and with such a heavy sea, that not a single vessel, steam or sailing, was to be seen in the Channel, all having run for shelter. At 10 a.m., the Great Britain was off Lundy Island, the gale continuing with the addition of the spring ebb, the wind being N.N.W., the ship steering W.b.N. and making 5½ knots against the sea, with 13 revolutions of her engines. From her being very light, she rolled tremendously, but still very easily; and when about 15 miles below the island at 20 minutes past 12, she was struck by a tremendous sea upon the starboard bow, and at the same time being met on the larboard bow by another sea, the shock was dreadful, and for a moment brought her to a stand-still. She instantly, however, "lifted" from the sea, and, on examination it was found that three of her starboard bow's bull's eyes had been stove in, with their frames; the diagonal bands of the fore-

castle deck buckled, the woodwork started two inches upwards, a portion of her carved figure-head and the carpenter's work of the bulkhead carried away, and the iron sheathing of both starboard and larboard bows above decks ripped in two places. Notwithstanding this shock, she, however, still held on her way, and at 20 minutes past 1 p.m. Pentire-point bore S. ½ E., distant about 4 leagues. At 45 minutes past 1 p.m. she still breasted the gale, and made eight knots and a half with the engines making 13½ revolutions, and having three spencers and stay-sails set. At half-past 5 p.m. the weather began to moderate, when she had four spencers, jib, and square mainsail set, the engine making 15 revolutions, and the log giving nine knots and three quarters, the wind being N.N.W., and the ship steering W., and by S. ½ S. At 10 minutes past 6 p.m. the Longships Light hove in view, and at 45 minutes past 8 it was passed, and she rounded the Land's End. In the opinion of highly scientific and able nautical persons on board, no other steamer could have done more than just make head against the gale, with such a sea as was running in the Channel.

The Great Western once was in a similar gale, and was off Lundy about the same hour of the day; she did not, however, lose sight of the island for the entire day, while the Great Britain, at her very worst was doing 4¾ knots, and, as I have stated, succeeded in getting round the Land's-End, and, of course, into smoother water at 45 minutes past 8 the same evening. At 40 minutes past 10 p.m. she was off the Lizard Lights, her sails (having become useless) being furled; the engines were then making 15¾ revolutions, the vessel going through the water 10½ knots; and at 45 minutes past 2 a.m. of Saturday she passed the Eddystone, bearing N.N.E. ½ E. At a quarter past 5 a.m. she was off Start Point, making 10 knots with 15 revolutions of the engines. She continued her voyage up the Channel at from 10 to 10½ knots, and at 45 minutes past 9 a.m., when off Portland, there being a light breeze from the westward, she set all her fore and aft sails, with her mainsails, and at 45 minutes past 12 p.m., entered the Needles Channel, and passed Lymington at 20 minutes past 1, making 11½ knots with 16 revolutions. When off Cowes, at a quarter past 2 p.m., she stopped for three minutes to land dispatches. She continued on her way gallantly, and at 10 mintues past 3 p.m, she passed Her Majesty's ship Apollo at at Spithead, fired a gun, and was loudly cheered by both officers and men, who crowded the decks of the Apollo. She contiuued her course, making an average speed of 12 statute miles throughout the day, and having rounded the South Foreland, came to an anchor in the Downs at 40 minutes past 1 a.m., Sunday morning, having performed, in 28 hours and 55 minutes, 320 nautical, or about 350 statute miles.

Sunday, at 55 minutes past 7, the ship again got under way, and her progress through the Downs was watched by the crews of at least 100 vessels. The wind having shifted during the night to W.N.W., it was upon her beam until she entered the Queen's Channel. At 25 minutes past 8 a.m., she was off Ramsgate, and at 55 minutes past 8 rounded the North Foreland. At this time the wind was blowing a heavy gale right a-head; she notwithstanding made 9¾ log, with 16 revolutions, and passed the Nore at 30 minutes past 11 a.m., where she was met by a large American ship, the Prince Albert, proceeding with emigrants to New York, who loudly cheered her as she passed them. At 30 minutes past 12 she came up with the Waterwitch, Hull steamer, a very fast steamer, and passed her in gallant style, having gained about five miles on her in an hour and a half. The Great Britain then proceeded up the river in the teeth of a very severe gale, and threaded her way through the numerous craft that lay in the different reaches with with the utmost facility. In Gravesend reach, she came into collision with a collier brig, which was at the time, as I was informed, dragging her anchor, and carried away her bowsprit, which, however, was only the least of a choice of evils, as she must have otherwise ran down a sloop that was coming down

the river, or plumped herself on shore. As she progressed up the river she was met by the Meteor and other river steamers, and was cheered by the passengers on board of them, and the crews of all the vessels in the river, as well as by many thousand spectators who lined the banks of the river at various places up to Woolwich and Blackwall. She reached Woolwich at half-past 3 o'clock p.m., and immediately slackened her speed, after which she proceeded at a moderate rate to her moorings at Blackwall. During the entire voyage the engines made 54,473 revolutions, with 163,419 revolutions of the Archimedean screw propeller; and the greatest rate of speed at which she went at any one time was 13 2-3 knots from Beachy-head to Dungeness. One hour and eight minutes after the Great Britain had reached her moorings at Blackwall the Waterwitch arrived, showing that the Great Britain had beaten her in speed by that time in a distance of 33 miles.—*Times.*

RETIREMENT OF SIR JOHN BARROW, BART. Our readers will have learnt, from recent report, the expected retirement of the second Secretary to the Admiralty, and we have now to record the realization of an event which cannot fail to produce that sensation of regret, which ever attends the departure of esteemed worth, from among those to whom it is familiar. A long life devoted to the public service will not fail to afford to Sir John Barrow, in his retirement, ample gratifying reflections on the exact performance of public duty; but we will venture to say that the retrospect will bring few more gratifying than those which are suggested by the maps of the Arctic and Antarctic regions. There, indeed, in the south, and in the north, as well also as in many other parts of the world, the proud pre-eminence of British enterprize in the pursuit of geographical discovery stands recorded for future ages; and let future ages know that the great patron and promoter of that enterprize and discovery, was Sir John Barrow! The establishment of the Geographical Society, the legitimate source and depository of geographical research, will afford another, and not the least gratifying memorial to which the friends of Sir John Barrow may point as the work of his hands; and with such facts as these only, well may they maintain that the advantages of his high station have been worthily employed. With them we may say in allusion to the author of such high deeds, *sic transit gloria mundi*; and to their solicitude for the declining years of his well-spent life, we may add our cordial wishes, that they may be fraught with those peaceful enjoyments, which reflections such as these cannot fail to bring. We understand that Capt. Hamilton, R.N., the private secretary to the First Lord succeeds Sir John Barrow.

MONTHLY RECORD OF NAVAL MOVEMENTS.

Aigle, Capt. Lord Paget, Dec. 24, left Malta for Athens; *Alfred*, 50, Commodore Purvis, Nov. 26, at Rio; *America*, 50, Capt. Hon. J. Gordon, Oct. 30, at Callao; *Amazon*, 26, Capt. Stopford, Jan. 14, arr. at Spithead from Sheerness. *Bittern*, 16, Com. Peel, Oct. 28, in Simons Bay.

Cormorant, st. v., Com. G. T. Gordon, Sept, 2, at Arica, Oct. 30, at Callao; *Cruiser*, 18, Com. E. G. Fanshaw, Jan. 1, left Plymouth for China; *Cleopatra*, 26, Capt. Wyvill, left Symons Bay, Oct. 4; *Collingwood*, 80, Capt. Smart, flag of Rear Admiral Sir G. Seymour, Oct. 22, arr. at Rio, Nov. 1, sailed for Valparaiso; *Caryefort*, 26, Capt. Lord G. Paulet, Sept. 30, at San Blas,

Caledonia, Cadorna, Lieut. Grantham, Oct. 16, left Buenos Ayres, for Mon
Wilson, Esq. and Portsmouth, Jan. 15, arr. at Spithead; *Crane*, 6, Lieut. Lew
Jan. 13, arr. at Plymouth; *Cygnet*, 6, Com. Layton, Nov. 2, at Accra.

Dauntless, 20, Capt. Onslow, July 5, at Rio Lejo; *Dublin*, 50, Capt. Tucke
Oct. 30, at Callao; *Dolphin*, 3, Lieut. W. O' Bryen, Oct., at Buenos carry
ing Mails between that place and Monte Video.

Electric, 10, Com. Hickeringe, Oct. 10, left Ascension for Congo; *Electr*
20, Com. Dudley, Nov. 10, left Barbadoes for Cayenne, Dec. 31, at Bermud
Energetic, Capt. Elliot, Dec. 4, at Grenada, 22nd touched at Demerara.

Fidelity, st.v. Lieut. Beadle, Dec. 14, at Gibraltar; *Formidable*, Capt. Ric
Flag of Vice-Admiral Sir E. Owen, Dec. 7th, arr. Malta; *Frolic*, 16, Co
Hamilton, Nov. 26, at Rio; *Fugeroux*, 42, Capt. Dunbar, July at Islay; *Fo*
42, Capt. Sir H. Blackwood, Nov. 19, at Trincomalee.

Hecla, st.v., Com. Duffil, Dec. 19, arr. at Alexandria, on way to Syri
Herlequin, 16, Com. Hon. G. F. Hastings, Jan. 8, arr. at Devonport fro
Singapore Sept. 1, Cape Nov. 22, St. Helena 27th; *Hyacinth*, 18, Com.
Scott, Dec. 27, at Bermuda; *Hazard*, Com. C. Bell, July 15, arr. at Auc
land from Sydney to sail for Bay of Islands; *Harlequin*, Jan. 13, arr. Spithea

Isis, 42, Capt. Sir J. Marshall, Nov. 8, in Simons Bay, Jan. 8, arr. at Spi
head, 9th sailed for Chatham; *Illustrious*, 30, Capt. Eden Dec. 21, at Be
muda. *Locust*, st.v., Dec. 24, commissioned by Lieut. H. Eden, Jan. 2
left Plymouth for Mediterranean. *Medina*, 12, Com. Crawford, Jan. 15, sail
for South America.

Medina, Jan. 2, commissioned at Portsmouth, by Lieut. Robson; *Ospre*
16, Com. F. Patton, Jan. 16, sailed for E. Indies and China.

Penelope, st.v. Commodore Jones, Nov. 18, left St. Helena for Ascensio
Pique, 36, Capt. Hon. M. Stopford, Dec. 15, at Antigua; *Pelican*, 16, Co
Pincher, Jan. 12, arr. at Spithead, grounded off the Kicker Point, but got
without damage, she brings about £250,000 in specie; *Pantaloon*, 10, Co
Wilson, Jan. 12, sailed for Africa.

Rolla, 10, commissioned at Chatham; *Resistance*, Com. Patey, 20 Dec. le
Gibraltar with 7th regt. for Barbadoes; *Rimon*, re-commissioned at Sheerness
Ringdove, 16, Com. Sir W. Daniell, Nov. 8, arr. St. Helena from Benguel
16th, left St. Helena for Ascension; *Rose*, 18, Capt. Sturt, Dec. 21, at Be
muda, Com. Polly, Dec. 31, at Bermuda.

Shearwater, st.v. Dec. 18, left Dublin; *Siren*, 16, Com. Smith, Dec. 23, pa
off at Portsmouth; *Styx*, sur.v. Capt. Vidal, Dec. 30, arr. at Spithead fro
Azores, 31st, sailed for Woolwich, paid off; *Savage*, 10, Lieut.-Com. Bowke
Dec. 22, paid off at Plymouth; *Salamander*, st.v., Com. A. S. Hammond, Ju
24, at Tahiti; *Sound*, Com. Hon. L. R. Drummond, at Gibraltar Dec. 14, 20
Skylark, re-commissioned at Sheerness; *Star*, 6, Com. Dunlop, Oct. 23, spo
him off Whydah; *Spitfyal*, st.v. Com. Maitland, Nov. 1, left Bombay for Co
lombo; *Spartan*, 26, Capt. Hon. E. Elliot, Nov. 20, arr. at Belize from Ver
Cruz; *Spider*, carrying mails between the river Plate and Rio Janeiro.

Thrasher, sur.v. Com. Wolfe, Dec. 18, arr. at Cork; *Tyne*, Capt. Glasscoc
arr. 4th at Malta from Beyrout; *Talbot*, 26, Capt. Sir T. Thompson, July 5,
Africa; *Thalia*, 42, Capt. Hope, Oct. 30, arr. at Callao from Tahiti and Valp
raiso.

Victoria and Albert yacht, Dec. 30, paid off and recommisioned by Lord A
FitzClarence; *Viper*, 6, Lieut.-Com. Carter, Nov. 26, at Rio; *Vixen*, st.v
Com. Giffard, Sept. 30, at Singapore.

Winchester, 50, Capt. Eden, Oct. 25, in Simons Bay, remained Nov. 22n
Waterwitch, 10, Com. Birch, Jan. 15, sailed for Africa.

Dartmoor, Dec. 22, sailed General Palmer, Lieut. Woolbridge for Ascen
sion, Jan. 13th, put into Rio in a leaky state.

ROYAL YACHT SQUADRON.

Sydney New South Wales August 3, *Wanderer*, B. Boyd, Esq., from Sydne

arr. Boyd Town July 31st, with loss of two jibs and foresail, starboard ports and quarter boat stove, head of bowsprit sprung, top mast rigging and head rails carried away. Portsmouth, Jan 15, arr. Georgian, Lyons, from Cadiz.

New Books.

Australia.—*From Port Macquarie to Moreton Bay, with descriptions of the Natives &c., &c.; by Clement Hodgkinson.* London: Boone, New Bond Street.

A residence of five years, with an employment giving Mr. Hodgkinson opportunities of exploring the country which he has described in this work, will always ensure it the character of a valuable addition to our yet scanty knowledge of the land which has but of late years lost its general title of "Terra Australis Incognita," the unknown land of the south. We are indebted, it appears for it, to a visit of the author to his home, and a laudable desire to place in the hands of his countrymen the result of his experience. It is given in the form of a journal, abounding in interesting narrative of the state and resources of the country, its natural productions, and the extraordinary character of the people by whom it is inhabited. It is not only a valuable contribution to our stock of Australian history and research, but possesses the charm of personal adventure and novelty to interest the general reader.

Ocean Thoughts, *homeward bound from India, by a young Officer in the East India Service.* London: Hatchard and Son.

"Ocean thoughts"! what a boundless expanse for the human mind to wonder and revel in does not the very name of ocean suggest! Far as imagination can stretch, from pole to pole, from continent to continent, from its azure bosom to those realms of light, which tell of other world, such are ocean thoughts, and such are those even of the "homeward bound." The little unpretending volume before us abounds in thoughts such as these, "steeped in religion's holy zeal," and interspersed with reminiscences of other days.

New Charts.

We perceive that a chart of the Strait of Dover has been published by Mr. Laurie of the coasts and sand banks of France, Belgium, and the Netherlands, from Boulogne to the Texel; and another of the Strait of Dover, including the coasts and sand banks of England, France, and Belgium, from Beachy Head to Margate, and from Dieppe to Ostend; the latter containing plans of Dieppe, Boulogne, Folkstone, Calais, Dunkerque and Ostend. We were wondering what use these would be to the mariner, being for the most part dry harbours, when we observed that the above charts profess to be drawn from the surveys of those eminent surveyors, Beautemps Beaupre, J. C. Ryk, Van Rhyn, Martin White, George Thomas, William Hewett, and F. Bullock, whose valuable productions we will venture to say, have never been out of the possession of the different offices of their respective governments wherein they were deposited, for the purpose of being reduced into Mr. Laurie's charts; at least we can take on ourselves to say as much of the works of our own surveyors. We must, therefore, suggest the correction of "published charts" for the word "surveys," as being more in accordance with fact and good taste.

Bottle Paper.—The following has been transmitted to the Admiralty by Capt. Hornby, Comptroller-general of H.M. Customs.

"*Ballinskelligs, Jan. 17th*, 1845.

Sir.—I beg to acquaint you that a bottle was washed on shore on Tuesday, 13th January, 1845, with a memorandum as under-mentioned. The

bottle drifted 158 miles in 36 days, the current setting at N.b.E., ½ E., nearly."
ROBERT BLAKE.

(*Copy.*)

On board the Zealous of London, Dec. 9th, 1844, all well; lat. 49° 2′ N., long. 9° 33′ W.; thrown to try the current: the finder will be good enough to communicate the result. W. B. WADE.

WRECKS OF BRITISH SHIPPING.

cs crew saved—d drowned.—Continued page 52.

VESSELS NAMES.		BELONG TO.	MASTER,	FROM.	TO.	WRECKED.	WHEN.
Agnes	31	Greenock	Bryce	Ichaboe	Greenock	Strangford	Jan. 6, cs
Ann		Sunderland	———	Ichaboe	Sunderland	foundered	Jan. 8,
Aquilon		Newcastle	Cleghorn	———	———	Scarboro	Jan. 9, cs
Ayrshire		Liverpool	———	———	———	Gomera	July 11,
Brilliant	35	———	King	Calcutta	Bombay	Saugey S.	Nov. 18, cs
Cambridge		———	Parker	Halifax	Dundalk	B, Fundy	Nov. 25, cs
Carleton		———	McAuley	———	———	Manicoujan	Oct.
Ceres		N. Shields	May	N. Shields	London	Haisboro S.	Dec. 30, cs
Conservative		———	———	Galveston	Liverpool	Long Cay S.	Nov. 25
Crusader	40	———	———	Quebec	England	St.Lawrence	Nov. cs
Design		———	Cawburn	Terceira	run down	off Exmouth	Jan. 10, cs
Dove		———	Lefevre	Sunderland	Jersey	run foul of	Jan. 4, 1 d
Elizabeth		———	Travers	Newport	Kinsale	Tramond B.	Jan. 11, 1d
Elizabeth		Hull	———	Hull	St. John N.B	Haycock H.	Dec. 7, cs
Eliza Bentley	45	———	———	Liverpool	Savannah	abandoned	Dec. cs
Erin		Guernsey	Sharp	Shields	St. Malo	Cherbourgh	Dec.
Esk		Shields	Moody	Newcastle	London	foundered	Dec. 21, cs
Harmony		Sunderland	Hall	Sunderland	London	Flamboro H.	Dec. 29, cs
John & Mary		Dublin	passed	abandoned	54½°N. 14°W	by Andromache	Dec.
Kate	50	———	lost in a	bay north	of Ichaboe	Africa	Oct. 27
Lady Grey		N. Shields	———	Sydney	Batavia	Alert reef	Sept. 1, cs
Orion		Scarboro	Almonds	London	Ichaboe	Africa C.	
Paragon		Lynn	Hubbard	Lynn	Newcastle	off Banboro	Dec. 15, cs
Royal Albert		———	Gillies	Liverpool	Ichaboe	BlackwterB.	Dec. 28, cs
Spray	55	———	———	Wilmington	Antigua	foundered	Nov. cs
St. Andrews		———	———	Newport	Boston	49° N. 28° W.	Dec. 21,
Star		Plymouth	———	Messina	London	foundered	Dec. 16, cs
Superb		———	Wild	———	———	Angra Pequena	
William Turner		Belfast	Evans	Ichaboe	———	Caernarvon	Jan. 11

32—Sunk off the Newark light vessel, Crew (15) saved by the Waterwitch, of General Steam Navigation Company with great credit to her Commander Mr. Gibson.
37—Wreck sold in December last for £60.
41—Run down by a barque, name unknown, which did not stop to see what damage she had done.
55—Crew and master saved by the barque Tacio Pedro, J. Smith, master.
57—Run foul of off Sicily.

PROMOTIONS AND APPOINTMENTS.

(From the Naval and Military Gazette.)

PROMOTIONS.

COMMANDERS—J. Lunn, G. Brigg, J. Willyams, E. Wilson, T. Crawford, G. White.

LIEUTENANT—W. Amphlett.

MASTERS—R. S. Rundle, J. Wilkinson, J. E. Petley, W. Roberts, D. N. Welch.

SURGEONS—C. P. Blake, M.D. for service in China, D. Thomson, M.D., and E. Nolloth.

PAYMASTERS & PURSERS—A. Jones, O'Brian, and Gransmore.

APPOINTMENTS.

VICE-ADMIRAL—Sir F. W. Austen, K.C.B, to be Commander-in-Chief in the West Indies and North America.

CAPTAINS—Lord A. Fitzclarence re-appointed to *Royal Albert* and *Victoria*, —Sir C. Sullivan to *Vindictive*.

COMMANDERS—F. West (1848) to *Vindictive*—W. Crispin (1844) re-appointed to *Royal Victoria* and *Albert* —R. C. Mitchell (1843) and G. K. Wilson (1840) to study at Royal Naval College—J. Simpson (1840) to *Rolla*—G. E. Davis (1842) to *Wolf*.

LIEUTENANTS—W. F. Burnett to *Eagle*—Eden to command *Locust*—L. P. Burrell (1840) to *Amazon*—J. Branch, W. Miller, M. Tylden to *Lily* H. Le Visconte (1841) to *Firebrand*—C. Walton and H. Hollinsworth to *Excellent*—L. Mackinnon (1842), W. H. Stewart (1842) to *Superb*—G. Cleaveland, W. Amphlett, F. Selwyn, W. Need, W. A. Munton to *Actæon*—W. Tottenham, Hon. O. W. Lambert to *Racehorse*—W. Heath to *Illustrious*—F. Martin (1844) and J. Fellows to *Persian*—P. A. Halkett (1842), C. J. Brickdale (1842), F. Christopher to *Acorn*—R. Dunlop, R. Alcock, R. H. Risk to *Penelope*—J. Stedhen (1815) to *Raven*—G. Morris (1823) to *Skylark*—E. J. Cooper (1842) to *Flying Fish*—E. Philpott to *Royal William*—J. Sanderson (1840) to *Fantome*—R. Robertson (1838) and P. Coventry to *Comus*—W. Creek (1815) to *Victory*—H. Lloyd (1841) and C. O'Brien to *Waterwitch*—D. Elliott and A. Barrow (1842) to *Caledonia*—H. G. Austen, (flag), A. G. West, W. F. Robinson, F. Belgrave to *Vindictive*—G. Willis, to *Rolla*—L. Browell re-appointed to *Victoria* and *Albert*—W. Robson to *Nautilus*—J. R. Thompson (1841) to *Pantaloon*.

MASTERS—W. Weatherley to *Ranger*—A. Halloran to *Osprey*—J. Petly to command *Lightning* steam-tender—F. Sturdes to *William* and *Mary*—D. Welch to *Electra*—W. Crane to *Skylark*—W. Ellis re-appointed to *Victoria* and *Albert*—J. Roberts to *Mulgrave* Powder Magazine—J. Tucker to *Vindictive*—G. Moore to *Daring*—F. H. Niblett to *Fantome*—J. Bowler to *Persian*—R. Rundle to *Comus*—J. L. Wilkinson to *Devastation*—A. Macky to *Superb*.

MATES—J. Byng to *Vindictive*—C. Kennedy to *Locust*—G. Erskine to *Lily*—H. G. Williams to *St. Vincent*—W. Swinburn to *Amazon*—A. Wodehouse to *Superb*—O. Bentall and F. Quin to *Osprey*—G. S. Boys to *Mutine*—C. Cerjat to *Firebrand*—A. C. Hobart to *Victoria* and *Albert*—S. T. Dickens and R Buchanan to *Albion*—M. O'Reilly to *Cruizer*—F. Smith and A. M'Naughtan to *Superb*.

SECOND-MASTERS—W. Braund to *Amazon*—R. Walker to *Netly* tender—E. M. Vincent to *Firebrand*—J. Symons to *Nautilus*—J. W. Lowe to *Actæon*.

MIDSHIPMEN—A. Campbell to *Victoria* and *Albert*—S. T. Jeyes to *Lily*—Smith to *Vindictive*.

NAVAL CADETS—E. Field to *Comus*—V. Dadelsen to *Persian*—D'Arcy to *Acorn*—S. Nicholson to *Rattler*—R. Cary to *Caledonia*.

SURGEONS—A. Bryson to *William* and *Mary*—R. D. Mitchell to *Rolla*—T. W. Jewell to convict ship *William* and *Henry*—J. Greenish re-appointed to *Victoria* and *Albert*—J. Coulter to *Superb*—P. Fisher to *Firebrand*—J. Vaughan to *Fantome*—H. Liddell to *Comus*—A. Bradford to *Actæon*.

ASSISTANT-SURGEONS—T. Tait to *Superb*—G. Roe to *Lily*—W. M'Dermott to *Actæon*—J. Acton to *Persian*—J. Boland to *Racehorse*—R. Hayward to *Locust*—T. F. Wolridge to *Cruiser*—J. Wade to Haslar Hospital—J. D. Cronin to *Rattler*—G. J. A. M'Culloch to *Acorn*—J. Forbes to *Comus*—W. P. Cook to *Ocean*—P. Sleven re-appointed to *Raven*—H. F. Williams and H. Sheer to *Agincourt*—R. C. Russell to *Mutine*—T. Hunter to Plymouth Hospital—J. Hindman and J. Christie to *Victory*.

PAYMASTERS and PURSERS—W. H. Reeves to *Fantome*—G. Waller to *Vindictive*—W. C. Boom to *Rolla*—W. Bell re-appointed to *Victoria* and *Albert*—C. Walker to *Acorn*—J. Hay to *Lily*—Jones to *Illustrious*—Pinhorn to *Carysfort*—J. Marten to *Comus*.

CHAPLAINS—F. Wells to *Albion*.

CLERKS—J. Moorman, T. Spear, & W. Biddlecombe to *Vindictive*—F. Maturin to the Admiral's office at Devonport—J. Lyne to *Locust*.

COAST GUARD.

Promotions—Com. J. Pulling to be Captain; Lieuts. R. Mann, G. Hemet and W. Marshall to be Commanders; Mr. J. Moore to be Lieutenant.

Appointments—Lieut. J. Stuart to *Ranger*—Lieut. C. E. Wilmot to *Lily*

Removals—Lieut. J. Slaughter to Pagham, Lieut. J. Jackson to Borisand, Lieut. M'Donnell to Haddock.

Births, Marriages, and Deaths.

BIRTHS.

Jan. 4, at St. Helier's Jersey, the lady of Capt. Thomas Henderson, R.N. of a daughter.

Jan. 5, at Reading, the lady of Capt. A. Murray, R.N. of a son.

Jan. 15, at Southville, the lady of Mr. Dunsterville, R.N. (of the Hydrographic Office, Admiralty,) of a son.

Dec. 20, at Holyhead, the lady of Com. C. Fraser, R.N. of a daughter.

MARRIAGES.

Dec. 24, at Chatham, T. M. Phulson, M.D., to Matilda Wilmot, daughter of the late Lieut. J. Anderson, R.N.

Jan. 7, at Plymouth, Lieut. S. B. Dolling, R.N. to Mary Sophia, daughter of Capt Whipple, R.N.

Jan. 8, at Bridlington, E. J. H. Tucker, R.N., youngest son of Lieut. Tucker, R.N., to Mary Caroline, eldest daughter of Capt. Curlewis, R.N.

DEATHS.

Dec. 26, at Stonehouse, Mary Sheppard Collins, eldest daughter of the late John Collins, Esq., Paymaster and Purser, R.N.,

Jan. 5, at Kensington, S. Lanigan, Esq. Surgeon, R.N.

Dec. 21, J. B. Cotman, Esq., Paymaster and Purser, R.N.

METEOROLOGICAL REGISTER.

Kept at Croom's Hill, Greenwich, by Mr. W. Rogerson, of the Royal Observatory.

From the 21st December, to the 20th January 1844.

Month Day.	Week Day.	Barometer.		Fahrenheit Thermometer, In the Shade.				Wind. Quarter.		Wind. Strength		Weather.	
		9 A.M.	3 P.M.	9 A.M.	3 P.M.	Min	Max	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.
		In Dec.	In Dec.	o	o	o	o						
21	S.	30·30	30·30	32	34	29	35	E	E	5	5	qo	qo
22	Su.	30·25	30·18	31	31	30	33	NE	NE	4	3	bc	bc
23	M.	30·19	30·19	30	32	29	33	NE	N	2	2	o	o
24	T.	30·31	30·29	31	32	30	33	E	SE	1	1	o	od 3)
25	W.	30·30	30·25	32	33	31	33	SE	E	1	2	o	o
26	T.	30·11	30·05	33	34	32	36	NE	E	1	1	of	of
27	F.	30·05	30·01	29	33	28	34	NE	NE	1	1	of	of
28	S.	29·98	29·94	37	43	30	44	SE	SE	1	1	bcf	or (4)
29	Su.	29·94	29·92	46	47	42	48	S	SE	2	1	or (2)	ofr 3) (4)
30	M.	29·97	30·01	37	38	37	39	NE	NE	2	2	of	o
31	Tu.	30·10	30·10	37	40	34	41	NE	E	2	1	bc	o
1	W.	30·16	30·14	36	41	35	42	NE	NE	2	1	o	o
2	Th	30·05	30·00	34	36	33	37	N	W	3	2	bcm	o
3	F.	29·97	29·94	30	36	28	36	SW	SW	1	1	bc	od (4
4	S.	30·14	30·18	38	43	35	44	SW	SW	2	2	o	o
5	Su.	30·14	30·11	43	48	40	48	SW	SW	4	4	or (1)	o
6	M.	30·10	30·14	43	47	42	50	SW	SW	2	2	bc	o
7	T.	30·25	30·23	44	47	43	49	S	SW	1	2	bc	o
8	W.	30·23	30·15	33	34	32	35	SE	E	1	2	of	ofd 4)
9	Th.	30·10	30·04	33	33	32	34	SE	SE	1	2	of	od (4)
10	F.	29·95	29·85	33	45	32	46	S	S	3	5	bc	qbc
11	S.	29·66	29·74	47	48	41	49	SW	SW	5	4	qor (1) (2)	or (3) (4)
12	Su.	29·76	29·83	44	43	42	46	E	N	1	2	or (1) (2)	or (3)
13	M.	29·68	29·59	40	46	35	47	SE	S	2	3	bcp 2)	bc
14	Tu.	29·60	29·68	41	41	40	42	E	W	1	2	ofr (2)	op (4
15	W.	29·70	29·70	40	41	38	42	S	S	1	1	bcp 2)	o
16	Th.	29·98	30·04	41	44	39	45	S	SW	1	2	bc	o
17	F.	30·12	30·06	37	41	33	42	S	S	1	3	o	o
18	S.	29·84	29·70	40	43	38	44	S	SW	6	6	qo	qor (4)
19	Su.	29·38	29·42	36	42	35	43	SW	SE	3	2	bc	or (4)
20	M.	29·10	29·50	36	42	34	43	N	N	8	6	qors (1) (2	qbc

December, 1844.—Mean height of the Barometer=29·988 inches; Mean temperature =32·8 degrees; depth of rain fallen 0·40 inches.

TO OUR FRIENDS AND CORRESPONDENTS.

Capt. Rohde's letter has reached us: we will attend to his wishes.

Thanks to the Master Attendant at Madras. His communication would have been more welcome if it had not appeared in a foreign print.

The South African Papers have just been received.

Our limits have again obliged us to reserve the notices of several books.

Hunt, Printer, 3, New Church Street, Edgware Road.

CHINA NAVIGATION.—*Formosa Channel, and Hong-kong Harbour. —Extract from the Remarks of Mr. J. Jackson, R.N., late Master of H.M.S. Cornwallis.*

(Continued from p. 732 of last Volume.)

RUNNING to the southward in the Formosa Channel from Amoy to Hong-kong the same strong set was experienced as in the northern part of the China Sea, with this difference, that there was more westing in it; from Breaker Point to Hong-kong the current sets nearly west, taking the direction of the coast. Pedra Branca, may be approached within a cable's length, and would be dangerous only on a dark night. Ships running with the monsoon, on this part of the coast, should keep a strict look out at night for fishing junks; hundreds of them trawl here from 25 to 30 miles off the land, and are generally in groups of two or three, the various groups being at irregular distances from each other.

I should think it advisable when bound from the north-east into Hong-kong to make Pedra Branca; it is a good departure, and either of the channels into Hong-kong may be steered for with greater confidence by a stranger when close off it. From the southward bound into Hong-kong the usual and best Channel is to the eastward of Great Lema island. All the islands in this vicinity are high, the most remarkable being Hai-pong (or Asses' Ears) which may be seen in clear weather six or seven leagues. During the north-east monsoon keep well to windward of this island, and steer for the east end of Great Lema, passing it at any convenient distance, for it is steep to, then haul to the north-west, and when the Asses' Ears are shut in, you will be in the Lema Channel. The islands Poo-toy and Loo-chow on the north side of the Channel are high and round; the latter more so than the former. Poo-toy may be approached with safety to a quarter of a mile if working in, and the whole north side of Great Lema may be borrowed on within half a mile. Having got between Great Lema and Poo-toy, should the wind fall light, and the tide be running to the eastward, a ship may drop anchor in 17 or 18 fathoms.

To the southward of Great Lema the tides run in eddies during the springs, and if the wind be light and variable, will take a ship round against the helm, but they do not run stronger than two miles an hour. Being between Lema and Poo-toy Islands and proceeding to Hong-kong bay, the channel between Lamma Island and Hong-kong will be found safe during both monsoons, and a distance of four miles saved; if this channel be taken, a north-west course from the east end of Great Lema will lead directly through it. There is little or no tide in this channel, and if the wind fall light it is safe to anchor in.

The cross bearings and marks given by Mr. Douglas for clearing the Green island spit are very good for large and heavy ships, but any vessel drawing only 18 feet water may haul round Green island with safety, when half a mile to the northward of it, indeed the passage *between* Green island and the west point of Hong-kong is quite safe for any ship going either in or out with the wind fair, the breadth being nearly one fifth of a mile and quite clear. H.M.S. *Cornwallis* went to sea from

Hong-kong bay through this passage and found 18 fathoms in mid-channel. Being to the eastward of Green island the bay is clear for working, the north side of Hong-kong is bolder than the opposite side, and may be approached within a quarter of a mile any where. The island Wan-chung-chow, which is on the north side of the bay, looks red and barren, and may be approached to a cable's length at the south-west point, the bay between it and the island Chung-yue is clear, the soundings being regular from 7 to 4 fathoms, but large ships should not stand further in than to bring the west point of Wang-chung-chow to bear E.S.E. After passing the west end of Wang-chung-chow, working to the eastward ships should not stand so close to the said island, for the soundings towards the east point run out shoal nearly half a mile. Having arrived thus far into the bay, anchorage may be taken up where most convenient, the depth not exceeding 12 fathoms any where, which depth will be found between Cow-loon point* and Hong-kong. Working in with a large ship, after passing the east end of Wan-chung-chow Cow-loon point must not be brought to the southward of S.E. ½ S. with that bearing 5 fathoms will be found, shoaling quickly to 4 and 3 fathoms.

From the northward bound into Hong-kong harbour, the Ly-e-mun channel may be taken, for which the following directions may be of use to strangers.

Having made out the Nine Pin rock, which is very remarkable for its slender conical form, steer to bring it to bear north, distant about 2½ miles, and then run west 5 miles. The Lee-mun channel will then be open, with the island Tam-too (which is high and round) bearing about N.b.E. and a small rock always awash lying on the Hong-kong side of the channel, bearing about north-west nearly one mile. With these bearings a N.N.W. course will fetch Bluff point, which slopes to the eastward, and is bold close to, having very high land inside it. From Bluff point which may be approached within a cable's length if necessary, a N.W.b.N. course leads to the narrowest part of this channel, which is about five hundred yards wide, with a depth of 25 fathoms, quite steep on both sides. Having this narrow pass open, and the centre bearing N.W. by compass, a small white rock will be seen beyond the narrow pass in Cow-loon bay; keep this white rock in mid-channel and steer for it until the extremity of Cow-loon point bears about W.S.W. The northern point of Hong-kong should be avoided, for it shoals suddenly from 10 to 4 fathoms, and there are a few scattered rocks, which only show at low water. These bear about south from the above named White rock in Cow-loon bay, and ships should steer well up to the northward for White rock before they keep away for Cow-loon point. From White rock in the direction of Cow-loon point, a small patch of low black rocks† will be seen, this patch must not be approached nearer than two cables, and always left to the northward. After passing the point, anchor where most convenient, except during the months of July and August, which are the months typhoons may be expected, during which season every ship at Hong-kong should be at anchor under the lee of Cow-loon point, it bearing from east

* Cow-loon Point is low having a red appearance, except at the extremity, which is green; from which green spot a small sandy spit extends a quarter of a cable.

† These rocks bear nearly north from Kellet's island six-eights of a mile.

to south-east in from 5 to 7 fathoms. On this side of the harbour several ships have rode out in safety, while every other vessel at anchor in other berths have driven, and sustained great damage.

The meridian distance from south-west point of Goo-long-soo (Amoy) to Cow-loon point (Hong-kong) I made 15m. 26s.$\frac{1}{10}$th west, the chronometer, (No. 801, by Arnold and Dent,) keeping its rate in the interval in a very astonishing manner.

The time of high water in this harbour at full and change is very irregular, differing at times nearly an hour, the greatest rise and fall I found to be 9 feet; springs never run stronger than 1$\frac{1}{2}$ or 2 knots, and the neaps very irregular, and sometimes hardly perceptible. To the eastward of Cow-loon point, and near to the narrow pass of the Ly-e-mun the tides run much stronger. To clear the small patch of low black rocks (before mentioned) which lie between Cow-loon bay and Cow-loon point, keep Green island its breadth *open* of the southern extremity of Cow-loon point: with these marks *on* you will be near ——— the rocks.

As the month of May advances, in this harbour a great change in the weather takes place. The steady north-east wind is done, and is succeeded by variable and light airs, cloudy, and at times overcast, with light showers: the thermometer which stood during the last month from 70° to 79°, now rises to 84° occasionally, and the barometer falls from 30·10 to 29·90, and at intervals of south-west light airs sometimes lower.

A change of wind to the north-east or east invariably brings clear, fair weather, the barometer rising to 30, and the thermometer falling to 80.

Towards the middle of this month rain is more frequent, and the wind comes in squalls from the N.W. with sheet lightning; but the N.W. wind seldom blows longer than a few hours. Calms generally follow, and then light variable airs, with a cloudy atmosphere, the thermometer rising to 84° and 85°. Notwithstanding the interruption of S.W. and N.W. breezes, the prevailing winds during this month may be said to blow from N.E. to E.S.E. and a continuance of fine weather for more than two or three days cannot be depended on.

June this year has set in with light airs from the eastward, veering now and then to the southward, sky quite overcast, with a great deal of rain, the thermometer varying from 75° to 84°, barometer pretty steady about 30. As the month advances there is every indication of the S.W. monsoon having fairly set in. Wind fresh and steady for days at S. by W. and S.S.W., then a spurt for a few hours from E.N.E. veering quickly to S.E., and then a calm, which is succeeded by a steady S.W. breeze again. During the calms and S.W. winds, the weather becomes quite oppressive; so sultry that it is difficult to breathe at times; from the 13th to the 16th day of the month, we had the thermometer from 90° to 94° in the shade, under the poop; to the great relief of every one this temperature did not last long, a light air occasionally springing up from the N.E., E., or S.E., which always brought the thermometer down to 84 or 85. The barometer a little before, and during the S.W. wind, stood at 29·80, but with E. or N.E. breezes, it was nearly up to 30.

The harbour of Hong-kong is so completely land-locked and surrounded with high hills, that ships at the anchorage are sometimes without a breath of wind, while to the southward of the island, and outside the

harbour there is a breeze from S. or S.W. The clouds often pass over the high peaks of Hong-kong, at a brisk rate from the S.W. when there is scarcely an air in the harbour; under such circumstances, it is not to be wondered at, that fever makes its appearance: many of the crew of the ship returning from their leave on shore, have been seized with intermittent fever, which remained with them some time. I should not consider it prudent to give leave on shore to any European crew at this season of the year; with a few exceptions, those only have suffered, who had been knocking about on shore.

Calms are more prevalent the beginning of this month, at intervals light breezes from S.E., S., and S.W., but mostly, and fresher from S.W., generally a clouded sky; thermometer from 86° to 90°, sometimes a little higher, the barometer from 29·90 to 29·84; the weather is still very oppressive; on shore it is exceedingly hot, and not at all calculated for an European constitution. Many who have been sometime in India, prefer its climate to this. Fever is on the increase this month, and a few marines have died from its effects. Every case of fever among the marines of this ship was contracted on shore at West Point, where they were on guard, and surrounded with swamps, old paddy fields, and ground that required draining, trenching, &c., &c. The medical men attribute this fever to the miasma arising from uncultivated paddy fields, and decayed vegetable matter, which has accumulated since we have taken possession of this island; and it is generally observed, that the vicinity of spots which had formerly been cultivated by the Chinese, but since our possession have been neglected, have proved very sickly to every one living near; fever and ague being the inevitable consequence. It would therefore appear that trenching, draining, and constant regular cultivation, should be at all times studied by every European, taking to himself a home, or a stopping place on this island.

As this month draws to a close, the weather looks more threatening; wind very variable, and light from S.E. to N.E., occasionally a spurt from S.W. and W.N.W., the atmosphere full of electric matter, and thick black clouds hanging rather low; very little lightning, but every indication of an approaching thunderstorm; the thermometer at midnight, and four in the morning 84°, at two and three in the afternoon, 89° and 90°. Barometer unsteady, from 29·80 to 29·70. July may be considered the most unpleasant, and unhealthy month in the year; ships should be well prepared for a typhoon towards the end of this month, and great attention paid to the barometer, a sudden and considerable fall of the mercury being the only sure sign of one. Great care ought to be taken to keep out of each others hawse in an E.N.E. direction, and in the event of a typhoon, I am of opinion, that a ship at single anchor, (with another at the bows, ready,) is better off than the one moored with a long scope of cable on each anchor.

(To be continued.)

The Arctic Expeditions from England.

The prospect of another attempt being made to penetrate the icy fastnesses of the north, and to circumnavigate America, suggests the propriety of looking once more into the subject of Arctic discovery. To ourselves this is not new. In a former volume, (1834, p. 266), we gave a brief, but complete account of all the former voyages, and we can do no better at the present moment than repeat that account. Most of the voyages, however, as will be seen, were fitted out by private funds; and, as some idea may be formed of the nature of the equipments, and their commanders, we shall preface our account by an extract from Luke Fox's narrative of his own expedition. It will, perhaps, be a refreshing variety to go back two hundred years, and observe how things were done in those days. Assuredly the old Fox will afford some amusement, by his very droll ideas; but, at the same time, although he will occasion the reader's smile, by the "perfect" manner in which his ship was equipped, he will no less command our admiration by the regulations agreed on for her discipline; albeit the use of the "cudgel" was to follow the boatswain's call when this was not readily obeyed. "North-west Fox" as our ancient voyager styles himself, or "Fox from the North-west Passage," concludes a preamble to his narrative, entitled "My Preparations to the voyage," with the following sentences in italics, and then proceeds with the articles of agreement between himself and his ship's company, as we have copied them.

I was Victualed compleatly for 18 *Moneths, but whether the Baker, Brewer, Butcher, and other, were Mr. of their Arts or professions or no, I know not, but this I am sure of, I had excellent fat Beefe, strong Beere, good wheaten Bread, good Iseland Ling, Butter and Cheese of the best, admirable Sacke and Aqua vita, Pease, Oat-meale, Wheat-meale, Oyle, Spice, Sugar, Fruit and Rice; with Chyrurgerie, as Sirrups, Iulips, condits, trechissis, antidotes, balsoms, gummes, vngents, implaisters, oyles, potions, suppositors, and purging Pils, and if I had wanted Instruments my Chyrurgion had enough.*

My Carpenter was fitted from the thickest bolt to the pumpe-nayle or tacket.

The Gunner from the Sacor to the Pistoll.

The Boatswaine from the Cable to the Sayle-twine.

The Steward and Cooke from the Caldron to the Spoone.

And for Bookes, if I wanted any I was too blame, being bountifully furnisht from the Treasurer with money to provide me, especially for those of study there would be no leisure; nor was there, for I found worke enough; and if the matter it selfe had not been in another place when sodaine occasion was present, it had bin too late for me (like the Holland *Skipper to runne to his Chest) to looke vpon his* Waggoner *booke. But those things I feare, you will say they are needlesse (yet give me leave to follow the fashion) and good for nothing, but to make Courtiers and Schollers marvell at my curiositie, and thinke strange that there should be so much adoe about making a Ship take the Sea.*

Things in this readinesse, I was brought to his Maiestie, where I received his Gracious favour with a Mappe of all my Predecessors, Discoveries, his Maiesties Instructions, with a Letter to the Emperour of Iapon.

The Copies of all which, Captaine Iames had.

REIGN OF SOVEREIGN	VESSELS	TONS	COMMANDERS.	SAILED.	WHERE FROM.	RETURNED	BY WHOM SENT.
Henry VII	1 Ship		John Cabot & Sons	—— 1497	Bristol	Uncertain	Company.
Ditto	2 Ships	200	Sebastian Cabot	May, 1498	Ditto	Ditto	Govern. & a Company
Henry VIII	3 { Trinidad Vasquez, & another }		Uncertain	May, 1527	Thames	1527	{ Probably a Company
Ditto	4 Trinity & Minion		John Hore	April, 1536	Thames	Uncertain	Ditto.
Edward VI	5 { Bona Esperanza / Edw. Bonaventure	120 / 160	Sir H. Willoughby / Rich. Chancelor	May, 1553	Ditto	{ Perish'd 1554	Company.
	Bona Confidentia	90	Cornel. Durfoorth			Perish'd	
Philip & Mary	6 { Edw Bonaventure / Philip & Mary	160	Rich. Chancelor / Uncertain	—— 1555	Ditto	{ Lost 1557	Ditto.
Philip & Mary	7 Serchthrift		Stephen Burough	May, 1556	Thames	1557	Ditto.
Elizabeth	8 { Michael / Gabriel / A Pynnace	30 / 35	Martl. Frobisher / Uncertain / Ditto	June, 1576	Ditto	{ Oct. 1576 / Sept. 1576 / Lost	Ditto.
Elizabeth	9 { Ayde / Michael / Gabriel	140 / 200 / 30	Martl. Frobisher / Uncertain / Edward Fenton	May, 1577	Ditto	Nov. 1577	Ditto.
Elizabeth	10 Fifteen ships		Martin Frobisher	May, 1578	Harwich	Oct. 1578	Govern. & a Company
Elizabeth	11 { George / William }	Barques	Arthur Pet / Charles Jackman	May, 1580	Ditto	{ Nov 1580 Lost }	Company.
Elizabeth	12 { Five ships one the Squirrel }	10	Sir Hump. Gilbert	June, 1583	Cawsand B	4 lost	Governmt.
Elizabeth	13 { Sunshine / Moonshine }	50 / 35	John Davis	June, 1585	Dartmth.	Sept. 1585	Company.
Elizabeth	14 { Mermaid / Sunshine / Moonshine / North Star }	120 / 50 / 30 / 10	John Davis	May, 1586	Ditto	Oct. 1586	Ditto.
Elizabeth	15 { Elizabeth / Sunshine / Helena }		John Davis	May, 1587	Ditto	Sept. 1587	Merchants
Elizabeth	16 { Discovery / Godspeed }	70 / 60	George Weymouth	May, 1602	Thames	Aug. 1602	Ditto.
Elizabeth	17 Grace	50	Stephen Bennett	—— 1603			
James I.	18 Hopewell	40	John Knight	April, 1606	Thames	Sept. 1606	Ditto.
James I.	19 A small barque		Henry Hudson	May, 1607	Ditto	Sept, 1607	Ditto.
James I.	20 Same		Henry Hudson	April, 1608	Ditto	Aug. 1608	Ditto.
James I.	21 Discovery	55	Henry Hudson	April 1610	Ditto	Sept 1611	Ditto.
James I.	22 { Resolution / Discovery }	55	Sir Thos. Button / —— Ingram	May, 1612	Uncertain	Sept. 1613	Ditto.
James I.	23 { Patience / Heart's Ease }		James Hall	—— 1612	Thames	Sept. 1612	Ditto.
James I.	24 Discovery	55	— Gibbons	—— 1614	Uncertain	—— 1614	Ditto.
James I.	25 Ten ships		Robert Fotherby	—— 1614	Uncertain	—— 1614	Ditto.
James I.	26 Richard	20	Robert Fotherby	—— 1615	Uncertain	—— 1615	Ditto.
James I.	27 Discovery	55	Robert Bylot	April, 1615	Thames	Sept. 1615	Ditto.
James I.	28 Discovery	55	Robert Bylot	Mar. 1616	Thames	Sept. 1616	Ditto.
Charles I.	29 A ship		— Hawkbridge	Between 1616 & 31	Uncertain	Uncertain	Supposed.
Charles I.	30 Charles	80	Luke Fox	May, 1631	Thames	Oct. 1631	Govermt.
Charles I.	31 Maria	70	Thomas James	May, 1631	Bristol	Oct. 1632	Company
Charles II	32 A ship		Zachariah Gillam	1667	Uncertain		Govermt. & Company
Charles II	33 { Speedwell / Prosperous }	120	John Wood / William Flawes	May, 1667	Thames	Lost Aug. 1677	Hudson's Bay Company
George I.	34 { Albany / Discovery }		George Barlow / Paul Vaughan		17	Thames	Lost	Hudson's Bay Co.
George I.	35 Whalebone		John Sowerby	June	172	Churchill	1722	Ditto
George II	36 { Furnace / Discovery }		Chas. Middleton / William Moor		174	Thames	1742	Govermt.
George II	37 { Dove / Whalebone }	140	William Moor / Wyndham Smith	May, 174	Thames	Oct. 1747	Company.
George III	38 Racehorse		William Hearne	177			
George III	39 { Racehorse / Carcass }		Hon. C. J. Phipps / Sam. Lucas	June, 1773	Thames	Sept. 1773	Govermt.
George III	40 { Resolution / Discovery }		John Cook / Charles Clarke	July, 177 / Aug. 177	Thames	{ Oct. 177 / Oct. 177 }	Ditto
George III	41 Lion		Wm. H. Pickers	May, 177	Thames	Sept. 177	Ditto

* Supposed as the vessels mentioned in Richard Eden's account, which were despatched to Muscovy

REIGNING SOVEREIGN.		VESSELS.	TONS.	COMMANDERS.	SAILED.	WHERE FROM.	RETURNED.	BY WHOM SENT.
George III.	42	Lion		Walter Young	Mar. 1777	Thames	Aug. 1776	Merchants
	43	By land		Alex. M'Kenzie	1789			
George III.	44	Beaver	84	Charles Duncan	May, 1791	Thames	1792	HudsB Co.
George III.	45	Isabella	382	John Ross	April, 1818	Thames	Oct. 1818	Governmt
		Alexander	252	Wm. Ed. Parry				
		Dorothea	370	David Buchan				
		Trent	250	John Franklin				
George III.	46	Hecla	375	Wm. Ed. Parry	May, 1819	Thames	Sept. 1820	Ditto.
		Griper	180	Matthew Liddon				
	47	By land		John Franklin	May, 1819		July, 1822	Ditto.
George IV.	48	Hecla	375	Wm. Ed. Parry	May, 1821	Thames	Oct. 1823	Ditto.
		Fury	327	Geo. F. Lyon				
	49	Baffin	321	Scoresby	Mar. 1822	Liverpool	1822	Ditto.
George IV.	50	Hecla	375	Wm. Ed, Parry	May, 1824	Thames	Oct. 1825	Ditto.
		Fury	327	Heh. P Hoppner			Lost	
George IV.	51	Griper	180	Geo. F. Lyon	June, 1824	Thames	Nov. 1824	Ditto.
George IV.	52	By land		John Franklin	Feb. 1825	Liverpool	Sept. 1827	Ditto.
George IV.	53	Blossom		F. W. Beechey	May, 1825	Thames	Oct. 1828	Ditto.
George IV.	54	Hecla and boats	375	Wm. Ed. Parry	Mar. 1827	Thames	Sept. 1827	Governmt.
George IV.	55	Victory		John Ross	1829	Thames	Oct: 1833	Private.
William IV.	56	By land		George Back	Feb. 1833	Liverpool		Gov.&Sub.
and Victoria	57	Terror		George Back	June, 1836	Chatham	Nov. 1837	Governmt.

1. JOHN CABOT, and his three sons, Lewis, Sebastian, and Sanchez, were empowered by a patent, in 1495, to sail under the royal flag, to make discoveries in the eastern, western, and northern seas. The account of it is vague and indeterminate, but that Newfoundland was discovered is evident from the following passage, in Latin, extracted from a chart drawn by Sebastian Cabot, and quoted by Hackluyt.

"In the year of our Lord 1497, John Cabot, a Venetian, and his son Sebastian, discovered that country, which no one before his time had ventured to approach, on the 24th June, about five o'clock in the morning. He called the land "Terra Prima Vista," because, as I conjecture, this was the place that first met his eyes in looking from the sea. On the contrary, the island which lies opposite the land he called the island of St. John, as I suppose, because it was discovered on the festival of St. John the Baptist. The inhabitants wear beasts' skins and the intestines of animals for clothing, esteeming them as highly as we do our most precious garments. In war, their weapons are the bow and arrow, spears, darts, slings, and wooden clubs. The country is sterile and uncultivated, producing no fruit; from which circumstance it happens that it is crowded with white bears and stags of an unusual height and size. It yields plenty of fish, and these are very large, such as seals and salmon; and there are soles above an ell in length, but especially great abundance of that kind of fish called in the vulgar tongue baccalaos. In the same island also breed hawks, so black in their colour that they wonderfully resemble ravens, besides which there are partridges and eagles of dark plumage."

2. SEBASTIAN CABOT.—These six ships are stated to have been about 200 tons burden, and two of them fitted at the king's expense. The first land seen was "Prima Vista," (Newfoundland), and the part supposed to have been seen is now Cape Bona Vista. From thence it is stated that they sailed to the southward, to about the latitude of the Chesapeake, and returned home.

3. THE DOMINUS VOBISCUM, and ANOTHER.—Of these two ships very little appears to be known. They were sent out at the instance of

REIGNING SOVEREIGN.		VESSELS.	TONS.	COMMANDERS.	SAILED.	WHERE FROM.	RETURNED.	BY WHOM SENT.
Henry VII.	1	Five ships		John Cabot & Sons	—— 1497	Bristol*	Uncertain	Company.
Ditto	2	Six ships	200	Sebastian Cabot	May, 1498	Ditto	Ditto	Govern. & aCompany
Henry VIII	3	Dominus Vobiscum, & another		Uncertain	May, 1527	Thames	1527	Probably a Company
Ditto	4	Trinite & Mary		John Rose	April, 1536	Thames	Uncertain	Ditto.
Edward VI.	1	Bona Esperanza Edw. Bonaventure Bona Confidentia	120 160 90	Sir H. Willoughby Rich. Chancelor Cap. Durforth	May, 1553	Ditto	Perish'd 1554 Perish'd	Company.
Philip & Mary	4	Edw. Bonaventure Philip & Mary	160	Rich. Chancelor Uncertain	—— 1555	Ditto	Lost 1557	Ditto.
Philip & Mary	7	Serchthrift		Stephen Borrough	May, 1556	Thames	1557	Ditto.
Elizabeth	5	Gabriel Moon Aid Dennis Marie Flower	80 50 40 30 20	Martin Frobisher Uncertain Dennis Martin Frobisher	June, 1576	Ditto	Oct. 1576 Sept 1576 Lost	Ditto.
Elizabeth	8	Michael Moon Gabriel	50 40 30	Uncertain Edward Fenton	May, 1577	Ditto	Nov. 1577	Ditto.
Elizabeth	12	Fifteen ships		Martin Frobisher	May, 1578	Harwich	Oct. 1578	Govern. & aCompany
Elizabeth	13	George William	Barques	Arthur Pet Charles Jackman	May, 1580	Ditto	Nov 1580 Lost	Company.
Elizabeth	12	Five ships the Swallow	200	Sir Hump. Gilbert	June, 1583	Cawsand B	4 lost	Governmt.
Elizabeth	13	Sunshine Moonshine Mermaid	50 35 120	John Davis	June, 1585	Dartmth.	Sept. 1585	Company.
Elizabeth	14	Sunshine Moonshine Ascension Elizabeth	50 40 120 70	John Davis	May, 1586	Ditto	Oct. 1586	Ditto.
Elizabeth	15	Sunshine Helena		John Davis	May, 1587	Ditto	Sept. 1587	Merchants
Elizabeth	18	Discovery Golden Lion	70 60	George Wermouth	May, 1602	Thames	Aug. 1602	Ditto.
Elizabeth	17	Grace	50	Stephen Bennett	—— 1603			
James I.	3	Hopewell	40	John Knight	April, 1606	Thames	Sept. 1606	Ditto.
James I.	14	Admiral barque		Henry Hudson	May, 1607	Ditto	Sept, 1607	Ditto.
James I.	20	Sacre		Henry Hudson	April, 1608	Ditto	Aug. 1608	Ditto.
James I.	21	Discovery	55	Henry Hudson	April 1610	Ditto	Sept 1611	Ditto.
James I.	22	Resolution Discovery	55	Sir Thos Button —— Ingram	May, 1612	Uncertain	Sept. 1613	Ditto.
James I.	23	Prosperous Heart's Ease		James Hall	—— 1612	Thames	Sept. 1612	Ditto.
James I.	24	Discovery	55	—— Gibbons	—— 1614	Uncertain	—— 1614	Ditto.
James I.	25	Two ships		Robert Fotherby	—— 1614	Uncertain	—— 1614	Ditto.
James I.	26	Richard	20	Robert Fotherby	—— 1615	Uncertain	—— 1615	Ditto.
James I.	27	Discovery	55	Robert Bylot	April, 1615	Thames	Sept. 1615	Ditto.
James I.	28	Discovery	55	Robert Bylot	Mar. 1616	Thames	Sept. 1616	Ditto.
Charles I.	29	Assay		—— Hawbridge	Between 1626 & 31	Uncertain	Uncertain	Supposed.
Charles I.	31	Charles	80	Luke Fox	May, 1631	Thames	Oct. 1631	Governmt.
Charles I.	32	Maria	70	Thomas James	May, 1631	Bristol	Oct. 1632	Company.
Charles II.	32	Assay		Zachariah Gillam	—— 1667	Uncertain		Governmt.
Charles II.	50	Success Albemarle Prosperous	120	Wm. Wood Wm. Flawes	May, 1677	Thames	Lost Aug. 1676	Govern. & aCompany
George I.	11	Success Albemarle		George Barlow Wm. Vanman	—— 17—	Thames	Lost	Huds B Co.
George I.	10	Success Albemarle		Capt. Scroggs	June 1722	Churchill	1722	Ditto.
George II.	5	Success Worcester		James M'Cleland Wm. Moor	—— 1741	Thames	1742	Governmt.
George II.	17	Success Worcester		Wm. Moor Wm. Smith	May, 1746	Thames (supposed)	Oct. 1747	Company.
George III.	13	Success		Wm. Hearne	—— 1770			
George III.	8	Racehorse Carcass		Hon. C. J. Phipps Capt. Lutwidge	June. 1773	Thames	Sept. 1773	Governmt.
George III.	17	Success Worcester		James Cook Alex. Clerke	July, 1776 Aug. 1776	Thames Plymth.	October 1780	Ditto.
George III.	17	Success Worcester		Richard Pickersgill	May, 1776	Thames	Sept. 1776	Ditto.

* Supposed, as the Cabots resided at Bristol, and by their patent, were obliged to return thereto.

account, Frobisher caused a native to be seized, and taken on board his ship. This man was brought to England, but died soon after his arrival. Some particulars concerning this voyage will be found in our 18th number; among them, a statement of all the expenses attending the "strange man of Cathay," including even his picture, painted by a "Ducheman" for the Queen's Majesty." A list of the instruments will also be found there, that were taken out by Frobisher.

9. MARTIN FROBISHER.—In this voyage, Frobisher appears to have first followed his former track from the Orkneys till he came to Frobisher Strait. He then went to the place where he had lost his men in the preceding year, and found their clothes. He, and his crew, had skirmishes with the natives, and brought home a man, woman, and child. No further discovery was attempted, and they returned with ore, as in the previous voyage, that was supposed to contain gold.

10. MARTIN FROBISHER.—This expedition of 15 small vessels, was fitted out with the view of collecting the ore, specimens of which had been brought home from the newly discovered land, called, by desire of Queen Elizabeth *Meta Incognita*, North of Hudsons Strait, although some writers supposed it to have been Greenland.* The persons embarked consisted of 40 seamen, 30 pioneers, and 30 soldiers, among which were bakers, gold refiners, &c. They passed up Frobisher Strait. The object of the expedition was not accomplished; and the vessels, excepting one, returned the same year, having lost 40 men.

11. ARTHUR PET.—The ill-success to the westward was the occasion of this trial to the eastward to find a way to Cathay. The vessels passed the north Cape, and penetrated as far as Waygatz Strait, Nova Zembla, but did not pass through it. Pet's ship got safe back to Ratcliff, (Thames), and the William, being separated from her in a fog, wintered in a harbour in Norway, from whence she sailed in February with a Danish ship for Iceland, and was never heard of more.

12. SIR HUMPHREY GILBERT.—This voyage is full of interest, from the circumstance of Newfoundland being taken possession of, the discovery that was made by it, and the fatal events by which it was attended. The ships arrived at Penguin, (now Fogo,) Island, and went on to Conception Bay, and afterwards to St. John Bay. Sir Humphrey Gilbert took possession of Newfoundland, and received presents from all the vessels he found there, particularly those of the Portuguese. Mutiny and sickness broke out in his fleet, while in St. John Bay, by which many were lost. He sailed in search of Sablon (Sable) Island, on which he was told that the Portuguese had landed cattle thirty years previously. His ship struck on a sand-bank, (probably off Sable Island) and several of her crew were lost. The admiral was saved, and went on board a small vessel of his fleet, (the Squirrel of 10 tons!) and shaped his course for England. But, having passed the Azores in September, they were overtaken by a storm; and the small vessel, in which the admiral had embarked, foundered, with all on board. Mr. Barrow, in his valuable Chronological History of Voyages into the Arctic Regions, quotes the following passage concerning Sir Humphrey Gilbert, from Prince's Worthies of Devon. "He was an excellent hydrographer, and no less skilful mathematician; of an high and daring spirit, though not equally favoured of fortune; yet the large volume of his virtues may be read in his noble

* See a paper on this subject in the Georgr. Soc. Trans. Vol. XII.

Cherie Island and the coast of Lapland, without being productive of any further discovery.

18. JOHN KNIGHT—had performed a voyage before to the north, in the year 1605, by the appointment of the King of Denmark, as the English mariners were considered the most experienced. Knight in the present voyage, passed the Orkneys, and "came to land" in 56½° N. An accident happened there, by which his ship was driven on shore, and became full of water. After doing all they could to stop the leak, he went in his boat in search of a harbour in which to repair her. Leaving two men in the boat, he went with his brother and two others, to examine the island on which they had landed. They waited in vain for his return, for they were never heard of more. The crew did all they could to repair their ship, and set up their pinnace, but they were driven away by the natives, and obliged to put to sea, their ship leaky, and the new pinnace neither caulked nor payed. They arrived safely at Newfoundland, from whence they returned to Dartmouth. The land they touched at must have been the coast of Labrador.

19. HENRY HUDSON.—Although several voyages had been performed to India by the English, the hopes of getting there by the north were not yet abandoned. Henry Hudson, an experienced seaman, was considered to possess the resolution that was thought only necessary to make it. He reached the coast of Greenland in 73° N., and named an opening "Hold with Hope." He had entertained the idea of Greenland being an island, and attempted to sail round it. He landed his mate and boatswain in 80° 23′ N, on the coast of Greenland. He penetrated to 82° N., but could get no further, on account of the ice, and returned to "Hold with Hope." It was his wish to have passed through this into Davis Strait, and return home, but the ice prevented him; after which he reached Gravesend.

20. HENRY HUDSON.—The second voyage of Hudson was directed to the passage between Nova Zembla and Spitzbergen. He reached Nova Zembla, but returned unsuccessful.

21. HENRY HUDSON.—In the year 1609, Hudson had made a voyage to America, in the service of the Dutch, and had discovered Hudson river. Released from his engagements with them, he entered again the service of the English company. It is related of Hudson, in this voyage, that his employers put on board his ship one Coleburne, in whose skill they had great confidence. This excited Hudson's jealousy, and, when on his way down the river, he deliberately landed this person at Lee, with a letter informing the proprietors of his reasons for so doing; which, no doubt, much annoyed them. Hudson passed the Orkneys and Fero islands, Greenland and Desolation. He named the islands of God's Mercy in 62° N., and Good Fortune, and saw the northern part of the coast of Labrador, which he named Magna Britannica. He also named Salisbury Foreland, Cape Diggs, and Cape Wolstenholme. He passed through the strait formed by those capes, and observed a wide sea to the westward, now Hudson Bay. Hudson's narrative here terminates. The rest of this voyage is supplied by a seaman. They sailed to the southward, with the land on the left hand, and penetrated to 53°, where they had the land on each side of them. Hereabouts Hudson found himself beset by the ice, and obliged to lay up for the winter. They had only taken

six months' provisions, and a series of dissensions and mutiny broke out. They were reduced to great privation, being compelled to subsist on moss and frogs, and the buds of spruce fir, with whatever fish and birds they could kill; several died in consequence. On the opening of the next season, as they were leaving their winter quarters, the crew again mutinied, and put Hudson, with his son, (a boy,) and seven others, into the sloop, with a gun, and a scanty supply of provision, and left them to their fate. The ship reached the strait, taking birds and moss where they could. They were afterwards attacked by the natives, who killed four of them, but they succeeded in getting clear of the strait. They made for Newfoundland, but, after the severest suffering from want of provisons, they reached Ireland, where they obtained some with much difficulty, and finally arrived at Gravesend. The southern and eastern shore of Hudson Bay was thus discovered.

22. Sir Thomas Button.—The command of these two ships was given to Captain, afterwards Sir Thomas Button, and the voyage was partly undertaken with the view of discovering Hudson and his companions who had been left by the mutineers. The ships entered Hudson Strait and passed Diggs Island, and afterwards named an island further west, which they called Carey's Swan's Nest. They wintered in Port Nelson, in latitude 57° 10′ N., so called after the first mate of the Resolution. Mansfield Islands were named the following season, and Button Bay, probably Hudson Bay, the western coast being named New Wales. Without finding Hudson and his companions or effecting any particular discovery, they returned to England.

23. James Hall, had already been to the north in the Danish service, but his present voyage, which was his fourth, was as unfortunate as that of Knight. He reached the coast of Greenland in 65° 20′ N., where in July, he was killed by the spear of a Greenlander. One of the crew was also killed afterwards, but there is no doubt that the atrocities committed by the early discoverers was the cause of this hostile disposition evinced by the natives. Without visiting any other land, the ships returned safely to Kingston-upon-Hull.

24. Gibbons.—Having entered Hudson Strait, Gibbons was driven back by ice into Nain on the coast of Labrador, called in derision by his crew, "Gibbons his Hole," where he was detained five months. The season being too far advanced when he escaped from it, he returned direct to England.

25. Robert Fotherby was accompanied by William Baffin, made for Spitzbergen, and arrived at Red Beach on the north-east point of it. They afterwards made an unsuccessful attempt to get to the north of Spitzbergen, and returned to England. Baffin, as a pilot, had made voyages to the north in the two preceding years.

26. Robert Fotherby.—The Richard, in which Fotherby again went out, accompanied by Baffin, was a pinnace, but he did not attain a higher latitude than in the preceding year; and the Russia Company did not make any further attempts at discovery in the north.

27. Robert Bylot, who had been three successive voyages to the north under Hudson, Button, and Gibbons, was accompanied by Baffin in the same ship, Discovery, which had made three former voyages. He arrived at Resolution Island, and the Salvage (Savage) Islands in 62° N.

He afterwards saw Salisbury Island, and named the Mill Isles in 64° N. He named Cape Comfort in 65° N., the highest northern latitude that he attained. He returned to Salisbury and Nottingham Island, and sailed from Diggs Island for Plymouth, where he arrived in safety.

28. ROBERT BYLOT.—In this interesting and important voyage, by which the northern shores of Baffin Bay were discovered, William Baffin served as pilot, having also served as mate of the same ship in preceding voyages. The company by which the Discovery was sent out, consisted of Sir Thomas Smith, Sir Dudley Diggs, Mr. John Wolstenholme, and Mr. Alderman Jones. The first land seen was in 65° N. in Davis Strait. Women Isles were named from the voyagers meeting so many women. Horn Sound, from horns brought to the voyagers by the natives. Cape Dudley Diggs was named, and Wolstenholme Sound—Whale Sound, from the number of whales found in it. Hackluyt Island, Sir Thomas Smith Sound, Carey Islands, Alderman Jones Sound, James Lancaster Sound were successively discovered. The ship continued to the southward along the ice, on the west shore of Baffin's Bay to Cumberland Straits; crossed over to Cocking Sound, 65° in Greenland, and afterwards returned to Dover Roads.

29. HAWKBRIDGE entered Lumley Inlet, Salisbury Islands, Diggs Island, Mansfield Island, Resolution Islands, and afterwards returned home; but there is much uncertainty about the whole voyage.

30. LUKE FOX.—The ship for this voyage was equipped by command of the King, under the direction of Sir Thomas Rowe, Sir John Wolstenholme, and the Trinity House. Mr. Barrow says of Fox, that "he was a keen shrewd Yorkshireman, and evidently a man of considerable talent, but conceited beyond measure; and the style of his journal is so uncouth, and the jargon so obscure and comical, as in many places to be scarcely intelligible." He had facetiously assumed the name of the "*North-West Fox*," and commences his journal thus, "Gentle reader, expect not heere any florishing phrases or eloquent tearmes; for this child of mine, begot in the north-west's cold clime, (where they breed no schollers,) is not able to digest the sweet milke of Rethorick," &c. He passed the Orkneys, Cape Farewell, Lumley Island, (now Marble Island) Dun Fox Island, a group of islands called Brigg's Mathematics, King Charles Promontory. A promontory of land called Fox's Furthest, on the west side of Fox channel was seen, after which he returned to the Downs.

31. THOMAS JAMES, in the Maria, passed Cape Farewell, Resolution Island, Hudson Straits. He met Fox near Port Nelson. His ship at the end of the season was run aground on Charleton Island, where they wintered, and suffered much from the scurvy. By the end of the following summer they contrived to get the ship home, and arrived at Bristol. James appears not to have been qualified for this voyage.

32. ZACHARIAH GILLAM went out under the immediate patronage of Count Rupert. It is stated that he stood into Davis Strait as far as 75° N., and then into Hudson Bay, and entered Rupert River at its southern extreme. Fort Charles was first built here by him, and the country called Rupert Land.

Previous to the conclusion of this voyage, King Charles the Second granted to Prince Rupert, and to "divers Lords, Knights, and Merchants"

a charter, dated the 2nd of May, 1669, by which his Majesty styled them, "the Governor and Company of Adventurers trading from England to Hudson's Bay." Hence the origin of the Hudson Bay Company.

33. The Speedwell, JOHN WOOD,—was accompanied by the *Pink* Prosperous, which was purchased by the Duke of York and Lord Berkley, Sir Joseph Williamson, Sir John Banks, and some gentlemen to effect a passage to China between Spitzbergen and Nova Zembla. The land they saw was the north cape of Lapland, afterwards Nova Zembla, where Captain Wood's ship was lost in the ice, in June. Point Speedwell, in Nova Zembla, was named after her. Having saved all they could, they returned to England in the Prosperous, and arrived at the Nore.

34. GEORGE BARLOW and VAUGHAN—were sent out by the Hudson Bay Company, under the orders of Captain James Knight, to find the Straits of Anian, but nothing is known of them, as they never returned.

35. JOHN SCROGGS—was sent in a small sloop by the Hudson Bay Company to search for Knight and Barlow. He saw Cape Fullerton. It was stated that he entered Sir Thomas Rowe's Welcome, but he was supposed only to have reached Marble Island, and returned unsuccessful to England.—He reached the parallel of 62° 30′, where he found some islands, probably in the north part of Hudson Bay.

36. CHRISTOPHER MIDDLETON.—The Furnace and Discovery, under the command of Captain Christopher Middleton, passed the first winter at Churchill, from whence they sailed in July, 1742. The land he saw was Marble Island; and passing through the "Welcome," he entered the inlet to the west, which he called Wager River, after Sir Charles Wager, and which he explored. He named Savage Sound and Dear Sound, in Wager River; Cape Hope; explored Repulse Bay; and returned to southward by Cape Dobbs and Marble Island, and thence to England. Captain Middleton, after his return from this voyage, was accused by a Mr. Dobbs, at whose instance he had performed it, on the faith of an anonymous letter, of having stifled the discovery of the north-west passage, thereby furthering the interests of the Hudson Bay Company at the expense of Government. Middleton did all he could to refute the charge, but did not succeed even with the Lords of the Admiralty; and in the following year, (1743,) an act of parliament was passed, offering the reward of £20,000 to any person, being a subject of his Majesty, who should discover a north-west passage through Hudson Strait to the western and northern ocean of America. How completely has time proved that Middleton was an injured man!

37. WILLIAM MOOR.—The California and Dobbs galley, under the command of Mr. Francis Smith, were equipped by a company, at the instance of a Mr. Dobbs. Saw Marble Island; wintered at Port Nelson, and fitted their long-boat, naming it the Resolution. They proceeded on in July, 1747, and looked into Chesterfield Inlet, and Wager water, and returned to Yarmouth roads.

38. In the year 1769, Mr. Samuel Hearne was sent by the Hudson Bay Company to make discoveries to the north, in America, by land. He set out in November of that year, and in the following reached Coppermine river, which he traced to the sea.

39. HON. JOHN PHIPPS.—The Racehorse, and Carcass, the former un-

der the command of Captain the Hon. Constantine John Phipps, afterwards Lord Mulgrave, were sent out by Government, at the request of the Royal Society, while Captain Cook was absent on one of his voyages. They proceeded to the east of Spitzbergen, and attained the lat. of 80° 48′; from thence to Nova Zembla, and soon arrived at Waygat Strait. They then endeavoured to penetrate to the westward, but, being stopped by the ice, returned home.

40. Cook.—We now arrive at the memorable voyage which deprived England of her great and justly admired circumnavigator. It is remarkable also, that Captain Clerke, who accompanied him in the same voyage, in command of the Discovery, died after he had succeeded him as the chief of the expedition. Forster relates the following anecdote of this officer:—"Clerke, a man of a noble disinterested spirit, had been security for the debts of his brother, Sir John Clerke, at the time that he went on board a king's ship to the East Indies. He having died in India, his creditors would have come upon Captain Charles Clerke for payment. Some people of rank, who wished him well, advised him to go into the King's Bench, as the sum that Sir John owed was pretty considerable, and much more than his brother Charles was able to pay. An act of grace, which came out soon after, set many thousands of prisoners at liberty; and, amongst others, Captain Clerke regained his freedom towards the end of July, and set sail in the Discovery, from Plymouth."

Respecting the premium for the discovery of the north-west passage, Mr. Barrow* observes—"It has been mentioned, that a reward of £20,000 was held out to the ships belonging to any of his Majesty's subjects which should make the passage; but it excluded his Majesty's own ships: the reward was moreover, confined to such ships as should discover a passage through Hudson's Bay. This act was therefore, on the present occasion amended, and so framed as to include his Majesty's ships, and to appropriate the reward for the discovery of "any northern passage" for vessels by sea, between the Atlantic and Pacific Oceans; and it also awards the sum of five thousand pounds to any ship that shall approach to within one degree of the north pole."

The vessels visited Table Bay, Van Diemen Land, New Zealand, the Friendly Islands, Otaheite, Turtle Island, Nootka Sound, in 49½° N., from whence they commenced exploring their way to Bhering Strait. The west coast of America was passed from thence to Prince William Sound, Cook Inlet, Oonalashka, and the coast of America to the northward; they then crossed to the coast of Asia in 66½° N. The northernmost extent that Cook reached on the coast of America was lat. 70° 45′ N., and the Cape he saw received the name of Icy Cape. From thence, after again crossing to the Asiatic coast, he returned to the Sandwich Islands, where he met his untimely end. The command of the expedition having devolved on Captain Clerke, he proceeded to Bhering Strait in the following season, and was prevented by the ice from penetrating so far as the ships had been under Captain Cook. Having determined to put into the harbour of St. Peter and St. Paul, in Kamtschatka, he died in sight of the entrance, in the thirty-eighth year of his age. The command of the expedition now devolved on Lieutenant Gore. On their way home, they touched at Macao, Simon Bay, the Orkneys, and arrived in England, after an absence of four years, two months, and twenty-two days.

* *Now Sir John Barrow.*

42. E. PICKERSGILL.—Was sent to penetrate to the north-west by Davis Strait. He coasted along the coast of Greenland and Muskito Cove. The farthest north latitude he attained was 68° 14′, in Davis Strait, after which he stood to the southward, to the coast of Labrador, and returned to England.

43. WILLIAM LYON.—Who succeeded Pickersgill in the command of the Lion, was sent out to explore the western shore of Baffin Bay; and if he should discover an outlet to the westward, affording any probability of a passage to the Pacific, his orders directed him to attempt it. He succeeded in reaching the latitude of 72° 42′ in Baffin Bay, but returned to the Nore without having made any discovery.

43. In the year 1789 Mr. ALEXANDER M'KENZIE departed from the Lake of the Hills, in North America, with the view of penetrating to the polar sea. He passed down the M'Kenzie River to Whale Island, which he placed in lat. 69° 14′, and which was afterwards corroborated by Franklin.

44. CHARLES DUNCAN, a master in the Royal Navy,—has added his name to the list of polar voyagers, in conducting an enterprize as little productive of the desired object as any of his predecessors. He encountered much ice in Hudson Strait, and only reached Charles Island in August. He wintered at Churchill, in Hudson Bay, and in July of the following year entered Chesterfield Inlet, where his crew mutinied, and the voyage was afterwards abandoned.

45. JOHN ROSS.—The first expedition of Captain Ross was certainly made on a grander scale than any other that had gone before it. Not only were the ships employed in it larger, but they were fitted in a manner "as strong as wood and iron could make them," and were supplied with a plentiful stock of instruments such as the advanced state of science demanded, with "divers cunning men," as old Hackluyt would have expressed it, to use them. This expedition had two objects—one, the north-west passage, to be attempted by the Isabella and Alexder; the other, the voyage across the pole, to be attempted by the Dorothea and Trent: the four ships to find their way through Bhering Strait. No pains nor expense were spared in their equipments, and most sanguine were the expectations of the result. The Isabella and Alexander passed Cape Farewell in May, and in August they had penetrated to latitude 75° in Baffin Bay, where, of course, a vast quantity of ice was found. The northern shores of Baffin Bay were passed as near as the ice would permit; and the description of that able navigator (who, it will have been seen, accompanied Bylot) was concluded to be as nearly correct as could have been expected. Still, however, they were not explored; and it is the opinion of experienced men, that channels will yet be found leading out of Baffin Bay, at its northern extreme. Captain Ross, being satisfied that no outlet could be found through Lancaster Sound, passed down the western shore of Baffin Bay, and returned to England.

The Dorothea and Trent made direct for Spitzbergen, and were much beset by the ice on the shores of that island. In July, they penetrated as far as 80° 32′, but were driven by a violent gale to seek shelter in the harbour of Smeerenburgh. The Dorothea was so much injured by the ice, that it was with much difficulty she reached it. In October following they returned to England.

46. WILLIAM EDWARD PARRY.*—The foregoing expedition may be considered to have been the first of that recent series of polar voyages which have contributed so much to our knowledge of that part of the globe; and this, commanded by Lieutenant Parry, as is well known, was the immediate consequence of it. The Hecla and Griper passed up Davis Strait, and were in Lancaster Sound by the end of July. On the 3rd of August, the ships, having been detained by a foul wind, penetrated through the sound to the westward, and discovered the strait which is justly distinguished by the name of Barrow, the enlightened secretary to the Admiralty, to whom the science of geography stands deeply indebted. The shores on either hand, as far as Melville Island in 110° W. long. were discovered, and named in this voyage, and the ships by the commencement of September had gained to the westward of it. The ice forming round them, obliged Lieutenant Parry to seek a harbour in Melville Island, in which to pass the winter. The islands on the north, among which was Melville Island, were called the North Georgian Islands. The month of August had arrived before the ships could be moved from their winter's position, when they returned to England by the same route they had so successfully adopted.

47. In connection with the foregoing expedition of Lieutenant Parry, a journey by land was performed by Lieutenant Franklin,† which, in point of severe and protracted suffering, has not been surpassed either before or since. In May, 1820, he left England with Dr. Richardson, of the navy, and, descending the Coppermine River, arrived at its mouth in July following. With the view of reaching Repulse Bay, the party proceeded eastward along the coast in light boats which they had with them. The shore of the Arctic sea between the mouth of that river and Point Turnagain was explored, from whence the party returned to their winter quarters, not without the loss of some of their companions. In a former number we laid before our readers the account of this journey, from the pages of the Edinburgh Cabinet Library, a little work signalised among others of the present day, by the very able manner in which it is conducted.

48. WILLIAM EDWARD PARRY.—Commander Parry,‡ in this his third voyage to the polar regions, attempted to penetrate to the westward in a lower latitude than Melville Island, in consideration that the shores from Wager River to the northward not having been closely examined, a passage might be found there. In July the two ships were in Hudson Strait, and in August had reached Fox Channel. Being disappointed in not finding a passage through Repulse Bay, as Middleton had been before them, the navigators succeeded in gaining the northern part of Fox Channel, where they passed the winter. In July following they continued to the northward, and in August reached the strait which was named after their ships, the Fury and Hecla. A journey on the ice was performed by Commander Parry, who, when he had reached the western extreme, considered the sea to the westward to be the Polar Sea, but which, by the information brought home by Captain Ross, is proved to be no other than the Gulf of Boothia, forming the termination of Prince

* Now Sir Edward Parry. † Now Sir John.
‡ He was made Captain in Nov. 1820.

Regent Inlet. By the end of October the ships were safely moored in a harbour at the entrance of this strait, where another winter was passed. It was in the beginning of August before the ships could be moved. Determined to leave nothing undone by which he might succeed in finding a passage to the westward, Commander Parry had meditated leaving one of his ships, after removing the crew from her, and passing another winter in the polar regions. Symptoms of scurvy among his men obliged him to relinquish this plan, and to make the best of his way to England, where the two ships arrived in safety. In this expedition, the shores of Melville peninsula were explored by Commander Lyon.

On the 3rd May, 1823, Commander Clavering in H.M.S. Griper, made a voyage to Greenland, Spitzbergen, and Hammerfest, for the purpose of performing some experiments with the pendulum in high latitudes; and although it was highly useful to science, was not remarkable for any geographical discovery.

49. Scoresby.—Although not a voyage expressly undertaken with the view of discovery, the extent of coast laid down by Scoresby entitles his voyage to notice here. On the 27th April the Baffin had reached Hackluyt Headland of Spitzbergen, in nearly 80° lat., without having experienced any frost. She was compelled to turn to the southward the next day, having encountered the edge of the ice, notwithstanding that in a former voyage he had reached the lat. of 81° 30′, in long. 19° E. The coast of Greenland was seen between the latitudes of 74° and 70°, and the various points, bays, and islands were laid down and named by Mr. Scoresby. It must, however, be conceded, that this coast had been previously discovered, and was not unknown to the old navigators. Hudson (19) had penetrated even to the latitude of 82°, but owing to the want of some depository for such documents, his charts and observations are lost to us. It is much to be regretted, for the sake of geography, that our ancestors, in their zeal for extending our knowledge of the globe, had not first formed a geographical society, or even a hydrographical office, in which such valuable and important documents might have been preserved to posterity.

50. William Edward Parry.—The plan adopted by Captain Parry on this fourth voyage was to pass through Barrow Strait and down Prince Regent Inlet, from whence, if possible, to gain the coast of America, and to continue along it to Bhering Strait. By the middle of June the ships had reached Davis Strait, but it was not till September that they could get into Lancaster Sound, and the 28th of that month found them in their winter quarters, named Port Bowen, in Prince Regent Inlet. In July following the ships left Port Bowen to make the grand attempt on which was founded all his hopes. The result was, however, at hand. Having gained the latitude of 72° 43′ and longitude 91° 50′ on the 11th August, the Fury was nipped by the ice, so as to become leaky, and not even seaworthy. The provisions and stores were landed, with a view of repairing the ship, but the damage she had sustained proved to be too severe, and having taken her crew and part of her stores on board the Hecla, Captain Parry found himself compelled to abandon her, and return to England, where he arrived in safety.

51. George Frederick Lyon.—The voyage of Captain Lyon in 1824, in the Griper, was productive only of disappointment. The first object

of the voyage was to gain Repulse Bay. Having passed up Hudson Strait, the Griper was nearly lost on Southampton Island ; the place was named by Captain Lyon "the Bay of God's Mercy." The Griper experienced further bad weather in the Welcome, and being fairly driven from her anchors, made for England. It has been stated that the Griper was a vessel but ill calculated for this voyage.

52. A similar journey to that which he had performed before, became again the duty of Commander Franklin. He was also, as before, accompanied by Dr. Richardson, and measures were adopted, by establishing provision posts, to prevent the possibility of a recurrence of those severe hardships which they had endured in their first journey. Provided with boats of a peculiar construction, by Lieut. Col. Pasley, of the Royal Engineers, they left Liverpool in February, 1825. The party wintered on the banks of the M'Kenzie River, at Fort Franklin, near the great Slave Lake ; Commander Franklin having previously employed a short interval between their arrival there, and the setting in of the winter in visiting the mouth of this river. In the month of June following, they embarked on the M'Kenzie river, and arriving at its mouth, one party, under Commander Franklin, proceeded along the western shore, while another, under Dr. Richardson, directed their course to the eastward. Having reached the meridian of 150° W. in the lat. 70° and named Point Beechey, Commander Franklin was compelled, on the 18th August, to retrace his way to the M'Kenzie river, in order to secure his arriving at winter-quarters before the season was over. Dr. Richardson and his party in the mean time, explored the coast between the M'Kenzie and Coppermine rivers, and both parties met at Fort Franklin in September.

53. Frederick William Beechey.—In connection with the foregoing expeditions was the voyage of Captain Beechey in the Blossom. And considering them all as directed to one object, that of settling the question of the north-west passage, while they afford a splendid instance of the exertions of an enlightened nation to ascertain, by well-planned and well-combined operations, the natural boundaries of sea and land, they are no less remarkable for individual exertion and perseverance, than as affording an instance of the uncertainty of human enterprise, and how the best laid plans of man may be rendered abortive. While Commander Franklin was using his best exertions to get to the westward from the M'Kenzie River, casting many an anxious look to seaward for the ships of Commander Parry, we have seen that an accident lost the Fury, one of his ships ; and, indeed, that if this had not happened, Ross has since shewn us that he never could have got to the westward from Prince Regent Inlet! At the same time that this occurred, the Blossom was off Icy Cape, and being unable to proceed further to the east, her barge under the command of Mr. Elson, her master, was despatched to meet, if possible, Commander Franklin and his party. The very day before the latter turned back to retrace his steps, Mr. Elson departed on his interesting voyage, and having reached Cape Barrow, distant only 146 miles from Point Beechey, was obliged to set out on his return to his ship.

But, although each party may be said to have separately failed in achieving their object, yet the question of a connection by sea between

the Atlantic and Pacific oceans by the north pole was satisfactorily established; and many miles of sea-coast, before entirely unknown, was delineated on the map.

54. WILLIAM EDWARD PARRY.—We now arrive at the remarkable attempt of Captain Parry to reach the pole by means of boats from Spitzbergen. They were constructed with thin planks and waterproof canvas, with [illegible] felt between them, by which means they united strength, lightness, and pliability. They were moreover supplied with wheels, to be used when crossing the ice. The idea, we believe, originated with Capt. Scoresby, and the plan certainly required all the energy and firmness of Captain Parry to put it into execution. The Captain proceeded to Spitzbergen with these boats, in the Hecla, his former ship, calling first at Hammerfest, in Norway, where he took on board eight rein-deer to draw the boats. Owing to the state of the ice, it was the 20th of June before he could leave the ship on his perilous expedition. Having secured [illegible] in Treurenberg bay, in Spitzbergen, he took seventy-one days' provisions, and, leaving the rein-deer and wheels as useless, in consequence of the state of the ice, he set out on the 22nd of June, to arrive, if possible, at the Pole. It was not long before the party reached a loose [illegible], that was neither ice nor water, but which was to be passed. Having the sun in their faces, they soon converted night into day, as, [illegible] the glare was not so powerful. Their progress was [illegible] having to unload the boats frequently to carry [illegible] which were separated from each other by [illegible] water. They were also much annoyed and delayed by the [illegible] occasionally, it was so rugged and sharp, that [illegible] consequence. The party continued on their arduous [illegible] steering by day in their boats, until the 24th of July, when they found that, in consequence of a fresh northerly [illegible] blowing for some days, they were losing ground; [illegible] course of three days they had travelled over ten miles [illegible] found themselves four miles to the south of the [illegible] started. This circumstance, with the great [illegible] met with in penetrating so far as they had done, [illegible] to relinquish the attempt to proceed any further. [illegible] been utterly made by the party, to [illegible] being the furthest that they [illegible] the south the same difficulties were expe- [illegible] before they rejoined the Hecla [illegible]

[illegible] who had made a previous voy- [illegible] a small steam-boat, the Victory, [illegible] Sir John Ross, Esq., and departed [illegible] Captain Parry, by passing [illegible] this voyage has been already [illegible] Captain Ross, we believe, [illegible] has proved that Prince [illegible] terminates in the [illegible].

56. GEORGE BACK.—The circumstances under which Commander Back, the companion of Franklin in both his journeys, went out to America are known to all the world. And, as one of the objects of his journey has been accomplished by the return of Captain Ross, there is no doubt that the directions forwarded out to him when this occurred, will enable him so to proceed, that his future exertions may be directed with the greatest efficiency towards adding to former discoveries in the polar regions.

57. GEORGE BACK,—In the year 1836 another attempt was made by "the way of Wager River" to trace the northern boundary of the American continent by Captain (now Sir George) Back, in H.M.S. Terror. This vessel passed up Hudson Strait in August, 1836, and left it on her way home in August, 1837, after encountering extraordinary perils from the ice, and a narrow escape from foundering; having been severely nipped by it, and kept on her broadside by a large portion adhering to her bottom. She was compelled to return home in a leaky condition with her stern-post shattered.

A WHALING EXPEDITION.

"THERE she blows!" sung out a man, in the usual measured tones, from the fore-top-mast head of a whaler, cruizing in the Mozambique. "There she blows!"—the same sound was re-echoed from every part of the vessel, and in an instant crowds were pouring up from all the hatches, and every eye directed upwards. "Whereabouts?" resounded half-a-dozen voices at once. "On the weather quarter," sung out the man. "There she blows."---"Tell the Captain," was the cry; but the Captain had heard it, and was up already. "Down with your helm," said he to the steersman, "and luff the ship to the wind; haul in the lee braces, and aft with the main sheet. Mr. Long," he sung out to the second mate, "get those fore and jib sheets aft, and make her all snug for going about; send a couple of hands up to shake the reef out of the fore-top-sail, and loose the fore-top-gallant-sail; we'll see if we can't make the old craft crack her sides with laughing to-day. You, sir," continued he to the man at the mast-head, "Whereabouts is the spout now?" "Bluff on the weather-bow, sir; there's a whole school" (shoal). "That's glorious," said he; "Steward, give the men a glass of grog." "Aye, aye, sir," said that functionary, to whom it just occurred, that in his hurry to hear the news he had left the cabin-boy in charge of a cask of rum, which he was broaching. "He'll be drunk as a piper," said he,---fully acquainted with the boy's propensities; and he bolted down below, vowing vengeance against the unfortunate lad if his breath even smelt of rum.

The reef was now out, and the top-gallant-sail hoisted, all the yards sharp braced, and the bowlines taut hauled; the breeze was stiff, and the old craft leaned to it within a foot of the gunwales, and foamed at the mouth like a mad dog. "There she blows!" sung out a number of fellows, who had in their eagerness to get a sight of their anticipated

prey, climbed up the fore-rigging. "They're meeting us," said the man at the mast-head. "Boatsteerers, get your geer in, we'll lower in half-an-hour," were the orders of the Captain, who was standing in the main rigging, with his glass in his hand; "and Mr. Brown, you'll get my boat ready; we'll have fine sport to-day, I guess, as Jonathan says."

All was hurry and excitement as these orders were given; boat-steerers were bringing their irons and lances up from below, getting their tubs into the boats, and bending up their lines. The men were each springing their oars, and examining their tholucks. "Jack," said an after to a fore-oarsman, "have you got a mat in your tholuck? I'll be hanged if some one ain't pinned mine. If I could catch him, I'd wring his head off." "You'll find a new one," said Jack, "in my lumber-box below, and while you're at it, just put your hand in the till, and bring me up two or three inches of neger-head: if I ain't mistaken, there'll be tough work to-day."

"Steward," sung out the Captain, "where's that glass of grog? Mr. Bowker just see if that black rascal's smother'd in the rum cask." At this moment the thick woolly head of this official, which bore no inconsiderable resemblance to a 40s. iron pot, emerged from the companion hatch, and after it followed in due order, his face, neck, and upper extremities, as the Doctor called them; and I dare say he was quite right to class all the four extremities together, for they bore no inconsiderable resemblance to each other, the upper being in no great degree dissimilar in bulk, length, and clumsiness from the nether. In one of his mittens he grasped the neck of a bottle as if about to strangle it, while the other held, in as delicate a manner as nature would permit, the glass which was to measure out the delicious beverage. Samson was, notwithstanding his awkward figure and address, a good-natured and faithful fellow; and, although inclined to brag a little sometimes of his adroitness to strike a whale, which he had only tried once, and was then so nervous that he missed the fish, and, entangled in a coil of line, followed his own iron, precipitating himself over the bows of the boat, yet was generally very much respected by the Captain and all his shipmates. The men who were not immediately engaged, had assembled aft, on the quarter-deck, all in the light rig of a shirt, canvas trowsers, and straw hat or striped night-cap, and evidently in great glee: some brought tin pannikins for their own or their messmates' grog; whilst others, trusting to the metallic character which their throats had acquired by long habit and free indulgence, boasted that they could swallow thunder and lightning if it were only in the form of real Jamaica.

After the grog was served and the preparations were made, the confusion subsided for a short time. We were evidently fast nearing our object, for the spouts now could be clearly discerned from the deck, and fine ones they were, and a goodly number of them too; joy seemed to brighten up every countenance at the prospect of a good day's sport, after three weeks of idleness. Even the old cook was jerking the tormentors at every one within his reach; and the little cabin boy was pitching heavers and balls of yarn at the pigs, accompanying the motion with a squeaking, "There she blows." Another five minutes and the orders were given, "Stand by the boats." In an instant every hand

was at his station; a dead silence succeeded---not a whisper was uttered; you might have heard a pin fall. "Luff her up and back the fore-top-sail." The braces rattled through the blocks, the yards swung round, and the sail flapped against the mast. "Lower away," and every boat disappeared from its davits, and their separate crews hurried over the side after them, ready to jump in as soon as they touched the water. "Keep that boat off the side, you'll jam her under the chains; there, she's all clear now and unhooked; shove off." This order was seconded by a thrust from the vessel's side; every oar was out, and the sleek boat danced over the water as cheerily as if she had been animated with the spirit of her crew. "Give way, my boys" said the steersman, "we must have the first rap at these fellows to-day;" and he accompanied the order with a forward propulsion of his body, as if to add fresh impetus to the weight of the boat, while every nerve of the crew was strained, and the ash oars bellied and sprung out of the water, as if they disdained to dip themselves in the clear blue element. "Come back," sung out the Captain from the quarter-deck, before we had got 200 yards from the vessel's side. "Long is swamped under the counter!" "No, I'll be hanged if I do," said the steersman; "let the lubberly fellow shift for himself, or sink; pull, my boys,---can't hear." "Come back," still cried the Captain; can't hear was the only reply received from the boatsteerer, and a more determined pull from the men.

"Bad beginning this," whispered a young oarsman. "Hold that croaking red rag of yours," muttered an amiable messmate, "and clap a locker on your jaw; or I'll do it for you." There was no resisting this argument at such a time, and the young fellow obeyed the injunction.

A few minutes of anxious stillness succeeded, in which every one found sufficient employment for his muscles and lungs without wasting either in farther colloquy, when the silence was again broken by the bowman; "Where are they now?" said he, in a tone rising above a a smothered whisper. "Right a-head, about a cable's length off," answered the boatsteerer, "half-a-dozen good stretches with your oar, Ben, and then you may lay it in, and get your irons ready; now, my lads, strain a point," and the boat spun like a top through the water. "Lay in, Ben; do you see that fine fellow to the leeward of the two; you must stick the iron in him. Another pull, my boys; sheer off, sheer off; the boat's nose is right under this fellow's tail," said the boatman, in an under tone. The next instant we were laying on our oars abreast, and to windward of three huge, black, greasy, and shapeless masses. What I learnt afterwards to recognize as the backs of the monsters, rose in an irregular mound from the water, level with the boat's gunwale; the head, which forms nearly a fourth of the whole bulk, was cylindrical and truncated; or, to describe it more appropriately, it appeared for all the world as if the heads of two of these brutes had been originally built in one length, like north country colliers, and the cook's axe, or some equally sharp instrument had made a fair section between their separate spout holes, and within six inches of each. The tails of these elegant playthings I could discern sculling about in the water like ladies' fans on a warm day, and heard pretty frequently of the latent energy contained in these instruments of destruction; I knew that a single whisk of one of them would have sprinkled the boat upon the water, like rain-drops after

a thunder-clap. Reader, you may suppose that my heart was anywhere but in my ribs at this moment; the fact is, it had been rapping against them since I left the ship, but it now took one tremendous leap and stuck in my throat; I was as cool, however, as a cucumber, and could with the utmost deliberation, have swigged off a stiff glass of seventeen-proof to the health of our good Queen, "God bless her." As soon as we had sheered up alongside of our prize, (for we had made sure of hoisting our colours on the carcase of one of these Spanish galleons), every eye was turned to the bowman, and the iron glanced from his hand over the backs of the interminable two, and struck the third behind the fin, just between wind and water. "Starn all," cried the bowman, but it was no use, the monster started a-head, and literally dragging the boat over his companions, almost capsized it, while the line whizzed round the loggerhead and through the groove in the boat's nose until it smoked again. "Water the line," cried the boatsteerer, through whose hand the line was gliding before it passed round the loggerhead, and who seemed to feel as if it were striking fire on his flesh, notwithstanding about half-a-dozen folds of "No. 1" canvas, which he had taken the precaution to provide himself:—two boat buckets were in immediate requisition, and the line was thoroughly drenched, as coil after coil disappeared, with the quickness of lightning from the tub. The whale had thrown up his tail and gone down. "How many coils are left?" sung out the bowman. "Only a couple," was the reply. "I fear she'll run it out all; but take another turn round the loggerhead, and snub her a bit." This was done, and the line was strained to its utmost, whilst the boat's bows were surged under water. "Slack off; you'll swamp the boat," was the cry, and a fathom or two yielded and brought her head up again: fortunately at this critical moment the fish was winded, and began to rise slowly.

All the boat's crew were now employed in hauling in the line, and coiling it snugly aft in the stern sheets of the boat, while the bowman and boatsteerer were looking out in which direction the line tended, and managing the boat so as to clear it of the whale when she rose to the surface. All but about 20 fathoms were now in, and the fish was rising fast. "Down to your oars, pull larboard and back starboard oars: back hard;—back, I say, or the fish will lift us." This was hardly uttered, when she shoved up her head within two yards of the boat, and blew up a most refreshing shower-bath. "Back all," continued the bowman, "and slue her nose to port, while I push this lance in her." He hove the lance, and the smooth and well-polished steel glided a full fathom up to its socket into the body of the fish. "She feels that," said he, with a grim smile; and certainly she seemed to do so, for she started a-head, as if she had been pursued by a pack of blood-hounds. On we went too, tearing through the water after her, at the rate of 12 or 14 knots, and not an inch of line was yielded this time. The breeze had freshened considerably, and a little swell had got up, so that the sparkling water dashed on each side of the boat, and over her wedge-bows, and rose above her gunwale when she delved through a breaker, from which she emerged and shook off the spray like a wild duck, only to bury herself for the moment under the next.

It was as much as the after oarsman could manage to keep the boat

clear out of the water. This was glorious fun for a real South Sea whaler, one who had acquired a thorough *goût* for the sport; for my own part, I confess, I thought there was considerable probability of the boat being swamped when dragged through a green sea coming bodily on to us, and whose bearded crest curled round and foamed upon us full five feet above the bow of the boat; but she passed through one after another, like a thread through a needle's eye, and I soon gained confidence, and enjoyed it as much as any one.

By this time the whole shoal was alarmed, and was pouring down from all sides upon the whale to which we were fast, to gratify, as I suppose, that very laudable curiosity common to whales as to men—of knowing "What's the matter?" and to discover and punish any aggressors on the peace of their community. We were now in considerable jeopardy; sometimes three or four of these bull-headed monsters coming down abreast, would threaten to lay the boat on her beam ends, and when the line was slackened off politely, and with all the speed imaginable to allow them to pass a-head of us, another would be discovered bowling up a-stern, with all his canvas set, and blowing and wallowing like a grampus; the boatsteerer was plying his long oar, and sluing the boat about in every direction, to escape a disagreeable detection by any of these jealous avengers of their injured messmate. And we fortunately did escape. After they had searched a short time in vain for the cause, and found the case apparently desperate, they all slunk off, (another point, by the bye, in which whales resemble men), and left the unfortunate to shift for himself. As soon as the coast was clear, and the whale had slackened her speed, we pulled up alongside, and the boat's nose was pushed right on her, and another lance found its way up to the socket, just under her fin. "That's surely a sticker," said the bowman, but she threw up her tail, and started a-head again, with accelerated speed.

"Hallo," said the boatsteerer, "there's Bowker water-logged, and our fish is running right down upon him; if she shoves her nose into his boat there'll be a pretty mess;" but fortunately she didn't steer direct for him, but passed within about half a cable's length. Here we could see the poor fellows in the water, on each side of their boat, rolling her from side to side, to jerk the water out of her. "What's the matter?" sung out the boatsteerer. "Lost a couple of irons, and got capsized to the bargain," was the reply. "Do you want us to help you?" "No," said they, "we'll manage it ourselves; mind you don't lose that fish." "We'll take care of that," muttered the bowman, and he again ordered to haul up alongside, that he may take a little more blood from his patient. "I think," said he, "this is one of Jonathan's fish; you must sound nine fathoms of cold steel before you reach his heart; here, then, goes for the third fathom;" and he certainly gave the full measure. "Ah, there she spouts blood," and the sea was all round in a short time dyed with blood, and covered with lumps of clotted gore. "Now, my lads, prepare for the flurry." The fish was quiet for a few moments, as if dead, and then started a-head by fits, backing upon the boat as suddenly, requiring the most adroit management to keep it clear of its tail, which was playing about, as if feeling for its tormentors, lashing the water into a foam, and dashing it in green seas over the boat; it would

then give a spring out of the water and turn short round upon the boat; which was slued round as quickly; and round and round they both went five or six times, like corks in a whirlpool, the one close to the other; while the fish was spouting a deep crimson blood, which indicated, as the boatsteerer very sagely remarked, "some main-pipe had sprung a leak;" and, after a few more eccentric movements, her strength appeared wasted.

Just at this juncture the boasteerer cast his eyes to windward, and saw Brown's boat fast to a fish, which was cutting all manner of capers; and twisting itself about like a lamprey. "That's a wicked one," said he, "and will try a young hand like Brown." The next moment a wild cry arose from that quarter, and a crash was heard. "He's done for, at last," said the imperturbable man, in the same calm tone. "Ben, just clap the drag with the blue flag on our fish, that the ship may pick it up, and let's pull to windward and see what's the mischief. I'm mistaken, if our messmate Brown aint gone to Davy Jones."

In a few minutes we were alongside the wreck. All the bow of the boat was sliced off as clean as if cut by a carpenter's saw, and the crew had placed the oars athwart the remainder, to steady it and keep it on its keel. As we pulled up to them, there was a kind of forced smile on their countenances. "Bad sport, to-day," said one or two of them. "Where's Brown?" asked our boatsteerer. "He's gone!" was the mournful reply; "the fish jammed him into the bow of the boat, and carried them off together." "Poor fellow," said the boatsteerer, "he's been my messmate three voyages; I taught him when he was a boy to splice knots and tie a reef-point, and a better boatsteerer there wasn't in the ship." As he paid this tribute to the memory of his departed messmate, more simple and sincere, as well as better deserved, than many a pompous eulogium, which is pronounced over the dust of the great, the tear dimmed his eye, and trickled down his iron cheek. "Well," said he, "its no use blubbering," and he drew his brawny and sunburn arm across his face, to brush away the only drop that human weakness had forced down its furrows, perhaps since his childhood. "Jack," said the bowman, "do you see that bit of the wreck to the windward of us, steer for it, perhaps we may chance to pick up a few of Brown's timbers there, and you know it will be just as well to sow them up decently in his hammock, and get the doctor to read the service over them." As we neared the bit of wreck alluded to, it was discovered to be the bow of the boat. "I think I see Brown's hulk," said the bowman, "and there's a shovel-nose lawyer (shark) making for it." "Run your lance through him," said the boatsteerer. "I won't be such a fool," was the reply, "it would only strike fire upon his side, and be fit for the lumber-locker afterwards." When he saw the voracious animal, however, turn up the white of his side, and open his enormous jaws, to seize a leg of the corpse, "I can't stand that," said he, and he caught up his lance, and plunged it through the body of the brute. The fish turned round, and writhed himself further up the lance, and clenched it on the other side. "Here's a pretty business," said the bowman, and laying hold of the pole, tried in vain to drag it out, while the fish spun round like a weather-cock in a whirlwind, and twisted the shaft into a corkscrew; two or three more drags to equally little effect, and he seized the boat-knife, and

cut the line which bound the iron to the pole; off the fish started almost directly downwards, with the lance through his body. "He won't get that out of himself," remarked one of the men. "I shant find another like it in a hurry," said the bowman, and as deep a cloud of grief seemed to pass over his countenance for the loss of his favourite lance, as had, a few minutes before, over the boatsteerer's for the loss of his messmate.

We now looked about for the corpse; it drifted a little to the leeward during this affray, and we dropt down upon it. It was sadly mangled; all the upper part of the body was beaten into one pulpy mass, and the skull was flattened like a pancake upon the jaws: on the head sheets of the bow, which was floating near, we could discover where the poor fellow's head had been crushed by the tail of the whale; a part of the skull was jammed into the wood with the scalp and hair on it. We lifted the body out of the water, and laid it on the line in the stern sheets, and having taken the wreck of the bow in tow, in rather a mournful manner, which was strangely contrasted with the hilarity and excitement of the few hours before, we proceeded to return to the assistance of the six men who were hanging on the wreck, with their oars crossed. Long, who had got his boat righted and patched up by the carpenter, had lowered from the ship, and reached them before we arrived. We divided the crew between us, and took both parts of the wreck in tow. "I hope," said one of the fellows, "the Captain will give us a glass of grog, after this sousing—need to wet inside as well as out." "Jack," said another, "have you got a quid in your hat, I've been chawing at this rope-yarn an hour."

During the course of these interesting remarks, we were pulling towards the ship, and as we neered the old craft, we could discern the earnest expression of the countenances gazing over the side. "Who's gone?" roared out several voices at once. Our tale was soon told, and as each one heard it he dropt some expression of compassion, or tribute of praise to the memory of the departed. The body was lifted upon deck, and the sailmaker immediately set to work to sew up a hammock, with half-a-dozen shot at its feet; this was effected while the men were taking their suppers below; and in about an hour the bell began to toll: the crew collected slowly at the gangway, and formed round the corpse. It was beautiful then to see the stern features of many a weather-beaten face relaxed into a childlike softness, and the heart, which only a few hours before beat high with intrepid daring, subdued and melted with generous pity. There was an awe in the scene which overcame even the most thoughtless. The topsail was backed, and the noble ship had stayed her gallant course for a moment, as if to act as mourner in the scene; and the bubbling sound of the water, as it laved her dark and glittering side, when she lurched in the long and heavy swell, or splashed beneath her heaving counter, answered in solemn cadence to the creaking yards and the whistling shrouds, and the snow-white sea bird, as it wheeled its airy flight around the giddy mast-top, uttered its shrill cry, which struck prophetic on the ear. The sun was setting just opposite the gangway, and its large red globe magnified through the mists that skirted the horizon, cast a livid glare upon the breakers, as their tops curled into a white foam, and was reflected on the faces of the men,

while above the deep dark ridge of vapours which lay upon the bosom of the waters, and into which the sun was just entering, like fleecy clouds of all fantastic shapes, whose hue was ever varying; sometimes of a deep purple, and edged with gold, then azure and crimson, and then all golden, were floating in a sea of ether: you might have thought the spirit of the departed had gone to inhabit those islands of the blessed, so calm and beautiful they seemed. The bell ceased to toll,—and in a clear and audible voice the surgeon read the solemn burial service of the English Church. When he came to that part, "we commit this body," he stopt,—a low stifled sob arose from the crowd, and even the men who had hold of the grating from which the corpse was to be precipitated, seemed for a time palsied; it was only for an instant, a heavy plunge in the next told that the sea had received its dead;—the waters closed over him.

The mighty ocean is the tomb of one who was almost unknown but to a few shipmates, who were paying these last honours to his mangled corpse, and it mocks in its magnificence the mausoleums of kings.

Sly's African Journal, Cape Town, 1844. E.

Selections from Ancient Naval Records.—No. II.

(Communicated by John Barrow, Esq., F.S.A.)

Extracts from a Book of Accounts relating to the King's Ships in the Thames in the time of Henry VIII.

"Here aftere ensuythe the recepttys of moneye whiche was recevyd by the comanndement of the kinge oure soveren lorde Henry the viij., by the hondys of John Hopton of Sere John Daunce, knyght, as more playnere dothe aperre by indentures of the same receptes made bytwene the said John Daunce, knyght, and the above namyd John Hopton.

"Here ensuythe the expenses, costes, and chargges hade and made by the comanndemente of the king owre soveren lorde Henry the viij., on his schippes with in the ryver of temmes from the secund daye of Novembre in the vj. yere of the reingne of our seide soveren lorde the kinge, unto the xx daye of Aprelle then next ensuynge, and payd by the hondes of John Hoptone then being clerke compterollere of all the kinges ryalle schippes for divers and sondry parcelles as pyche, tarre, rosen, talowe, ropes, with other divers necessaries for the same as waygges and vytelles of Carpinteres, Calkers, and Sawyers with other divers Artyfycers apone the same schipps, wurkinge and waygges of shipekepers as it apperethe by parcelles folowynge."

The items which follow are of *no* great interest, except as shewing the rate of wages, &c., of which the following will give some notion, and the last items are not a little amusing

"Waygges of Schippe Wryghttes wayggyde by the daye.

"Tomas Wether at viij d. the daye by xiiij dais,

amountinge to . .	ix s. iiij d.	
Robert Watson at vj d. the daye xvj. dais	viij s.	
Robert Towne at iij d. the daye by xvj dais	iiij s.	xxviij s. vij d.
John Blakemon at vj d. the daye viij dais dj.	iiij s. iij d.	
his servante at iiij d. the daye by ix dais	iij s.	

Laurence Mertenson at vj d. the daye by vj dais	iij s.	xxvj s. viij d.
William Goode at iiij d. the daye by x dais	iij s. iiij d.	
John Corbe at ij d. the daye by vj d. dais	xij d.	
William Bottere at vj d. the daye by v dais	ij s. vj d.	
Phillippe Wyndall at vj d. the daie by xj d. dais	v s. vj d.	
John Holmes at vj d. the daie by xj dais	v s. vj d.	
Tomas Belton at vj d. the daie by viij dais	iiij s.	
Perce Lanne at vj d. the daie by oon daie	vj d.	
Tomas Harres at iij d. the daie by iij dais	ix d.	
Berclemewe Moptide by oon daie .	vj d.	
Also payde to Mastres Leyghttone for the hyre of ij bedes to logge the seyde Carpinteres by the tyme of ij wekes xvj d., and to Bayly's wyffe of Lymoste, for oon bede for Tomas Wether and his two servanntes by the tyme of ij wekes viij d., so to them amountethe the hole . . .		ij s.
Payde also to a Copersmythe dwellinge in Sowth werke for a ketull weyinge xxxiiij lib. at iiij d. ob. the lib., whiche ketull was delivered to the cryste amountynge to		xij s. ix d.
Payde also by the hondis of the seyde Tomas Sperte for the vytelles of iiij C. mariners that holpe to bryngge the seyde schipp from Eyrethe to Barkyn Creke by the tyme of iiij dais thes parcells folowinge furste to Parker, baker, of Dettford for xxx dosen of brede xxx s., paide also to Wylliam, bocher of Eyrethe, and to a bocher in Sowthe werke for the flesche of v oxen after the ratte of xvj s. the oxe iiij ti, and for fysche x s., paide also to Goldinge of Wullewyche for x pipes of bere at vj s. viij d. the pipe iij ti. vj s. viij d., and for dj m^{e} of wode ij s. vj d. and for ij dosen of candelles ij s., whiche brede, bere, fysche, and flesche, wode, and candell was spent and occupyed by iiij C. persons aforeseid by the tyme of iiij dais begynnynge the secund daye of Decembre, and endinge the vth daie of the seyde monthe amountinge to		ix li. xj s. ij d.

The qweyer of accompte of the Kinges Ryall Schipps beynge in Temmys, from xj daye of Aprile, in the vj yere of the Reigne of the most redowtyst Kynge Henry the viij$^{th.}$ unto the

The Mary Imperiall,
The Marie and John,
The Great Barke,
The Marie George,
The Rose Galle,
The Great Barbara,
The Swepestake,
The Henry Gracedew,
The Criste.

The Grett Barke.	Also payde to John Brereley, purser in the seyde schippe, for serten stuffe, to hym bowght, that is to seye, for vj scopes, xij d. for vj bowles, xij d. for xv li of thrommes, i s. vj d. for nayles, j d. for dj m^{l} bylletts to hett pyche, ij s. vj d. for vj stone of owcam, ij s. and for vj. scoperes, iiij s. for a dosen of lether bagges for gonners, vj s. for iij dosen of parchemente skynnes for gonners, after the ratte of ij s. iiij d. the dosen, viij s. for vij. queyeres of papere riall, at viij d. the queyer, iiij s. viij d. for iij peyre of balaunces to wey gonepowder, xij d. for ij soundynge lynes, xviij d. for oon compace and a rennynge glasse, v s. for the carege of harnes owt of London to the schippe att Depford, xij d. for oon whitt lambe-skynne, to make sponges, j d. for mendinge of the pyche ketull, iiij d. for the hyre of a where with C. dj of talowe from London to the schippe, ij d. for dj m^{e} of scopernayles, xx d. for dj m^{e} of vj penny nayles, ij s. for dj m^{e} of iiij penny nayles, xij d. for a m^{e} of smalle takettes for the gonners, iiij d. for vj. whitte plates, vj d. for vj blake plates for charginge ladulls, xij d. So to hym payed amounte the hole to	xlvj s. iiij d.
	Waygges of Schipwrygettes, wayggyde by the daie.	
	John Jerrarde, at vij d. the daye, by iij dais, xxi d.	
	John Beke, at iiij d. the daye, by iij dais, . xij d.	
	Berclemewe Moptid, at vij d. the daye, by iij dais, ... xxj d.	
	His Sone, at iiij d. the daye, by iij dais . ix d.	xj s. ix d.
	Robert Bolte, at vj d. the daye, by oon daie vj d.	
The Mary George into Levante.	John Blakemon, at vj d. the daie by the tyme of vj daies . . iij s.	
	Willian Tyler, at vj d. the daie, by the tyme of vj dais . . iij s.	
	Payde also to John Restryke, master in the seyde schippe, for the vytellinge of the seyd vij Carpinteres and Calkers, wurkyn on the seyde schippe, by the tyme of xxv dais, every of them, att ij d. q^{a} dj q^{a} the daye, amountethe to	iiij s. xj d.

CHRONOMETERS AND LUNARS.

27, *John Street, Bedford Row, February 11th*, 1845.

SIR.—Having just returned from a voyage to China, I beg to offer you the following remarks, and which perhaps may be found useful for the information of mariners. I found on making the Island of St. Paul (Indian Ocean) that its longitude was too far east, and instead of its being

77° 52′ E., I made it in about 77° 30′ E., this I was confirmed in, by my run to Java Head, about three weeks after.

The islands of St. Pierre, off the north-west coast of Borneo (China Sea,) are also incorrectly placed, as by a run of three days from Gaspar Island, where I had excellent sights for my watches, and also at noon when I was near them, I find they are placed too far east, and instead of their longitude being 108° 53′ E., their longitude is 108° 43′ E.

I would now beg to offer some remarks relative to chronometers, and the fearful consequences that may arise if we place too much confidence in them, which from their beautiful and improved construction we are now too apt to do, and neglect those observations of the Heavenly bodies (which can only be of use by their being in constant practice) when you may have confidence in them.

On my outward voyage, I had a beautiful watch of Murray's, which differed only nine seconds, in my run from Portsmouth to the Great Ladrone (on the coast of China). I placed great reliance on this watch during my homeward voyage, after leaving the coast of Java, and as soon as the moon came in distance I obtained a few sets of sights which gave the watch a considerable error, nearly three minutes. At this time I imagined my distances must have been incorrect, but the day previous to getting on the L'Agulhas bank, and in a run of about thirty days from Java Head, I was fortunate enough to get the mean of some thirty or forty distances, and I was much astonished that they gave the watch an error of ninety miles to the westward. I also carefully observed the sun's semi-diameter, and this corresponding with the Nautical Almanac, gave me confidence in my sights, and shook my confidence in the chronometers. It also fortunately placed me on my guard, and as on rounding the land, I was in a position to make Cape L'Agulhas at daylight I did not bear away. I was running nine knots at the time, with a strong S.S.W. wind, and did not see the Cape until 2 P.M., having run since daylight about 80 miles departure, which made the lunar sights as near correct as I could take the bearings of the land, at about four leagues distance in hazy weather. Had I been by chronometer, near the longitude of the Cape in the evening, I certainly should have borne away before morning, and had I done so, the melancholy fate of the ship which I commanded would, I fear, have been similar to the Arniston, Northumberland, and various others.

How to account for this error in the watch has quite bewildered me, excepting it arose from magnetic attraction, as from some cause or carelessness a brace of pistols was placed close to the watches, which I had removed, directly I found the watches had altered their rates. The chronometer has since remained stationary, and retains the same rate as when I was off the Cape.

On my passage towards England, after rounding the Cape, I took every opportunity of obtaining lunar distances; and two days before I reached St. Helena, I spoke a ship which had also seen Cape L'Agulhas, and we differed seventy miles in our longitude. This startled me. But when I found my brother mariner had not taken any lunar sights, and having confidence in my instrument, I steered boldly for the island, and made it ahead about an hour before daylight.

I was at St. Helena two days. Each day I got the Greenwich time from

the observatory, and in taking the mean of my lunars about 100 distances, I was much pleased to find we only differed one second from each other.

I would from these circumstances caution mariners, not to be too confident in their chronometers, and to lose no opportunity of obtaining lunar observations when practicable, and which I fear is now too much neglected, and which unless they are constantly practised can be of little avail, and can give no confidence to the observer. I have generally rated my chronometers by lunars, and have hitherto been fortunately correct in doing so, as they seldom retain the rate given by their constructors, and having two sextants, one of which being Troughton's, which as an instrument of confidence for navigation, is worth to me all the chronometers that were ever constructed.

I have once before made some small contribution to your work, and am a subscriber from its commencement, and many an agreeable hour, I spend at sea in conning over its pages. Should you think this worth inserting, or any part of it in your publication, I beg you will do so.

I have the honour, &c.,

T. N. WEBB,

To the Editor, &c. *Commander of the Ship City of Derry.*

IMPROVEMENTS OF THE SEA-PORTS OF BRITAIN.

SIR.—Every thing which relates to our maritime commerce must be interesting to the patriot; for, however wedded men may be to their own private interests, we may presume, that there are few or none who are unmindful of the general prosperity of their country.

With respect to the English Channel it is well known that surveys have been held by competent officers, and that some of their reports have been published. From the Report of the Commissioners appointed in 1844, it appears that Refuge Harbours are recommended to be formed at Dover, Seaford, and Portland. One at the Scilly islands would prove of vast importance to our shipping.

The estimated expense of forming the three havens is stated to be—for Dover £2,500,000; for Seaford £1,250,000; and for Portland £500,000. Harwich is added, at a cost of £50,000. But the result of any determination of the Government to fulfil these recommendations seems yet to be in embryo.

It has been often remarked that, "nothing is certain but death": but is it not evident to our senses, to our intelligence, as to our observation, that mutation is also certain in the moral as in the physical world? "Procrastination is the thief of time", and delay often leads to difficulties which might have been averted by a timely promptitude and the display of a little exertion. Let us, therefore, be vigilant at the present, that we may not reproach ourselves in the future. The political horizon may be clear at this moment, (but mutation hangs e'en on a sunny ray,) and it is quite impossible to predict how long it may continue unclouded.

A glance at the revolution which that potent power, steam, has effected

since the close of the last war, in the means by which we carry on our ocean commerce—the innovation which it has introduced into the Naval establishments of other nations as well as our own, ought to convince us that a future war will be conducted at sea in a very different manner from any of the preceding wars. Hence, as our commerce is the main-spring of our prosperity, it behoves us to guard against all risks to its interruption; and, as the English Channel is the "high-road" which conducts to the great national emporium, and there is no harbour of refuge (properly so called) on its shore, wherein our mercantile shipping could find a ready shelter, or security from storm or enemy, it is sincerely to be hoped that delay will no longer ensue in the consummation of so desirable a point as that of establishing more than one haven on that line.

With reference to the improvement of ports, private interests will, no doubt, urge wealthy and enterprising individuals to exert themselves in the formation of docks, basins, and breakwaters; and even to form new harbours, deepen rivers, &c.; but the sort of havens required for general purposes, are on too large a scale and too expensive in their formation, for private means. The Bute Docks at Newport, on the Bristol Channel, and those of Seaham harbour on the eastern coast, attest what can be effected by individual enterprise. At Brixham a haven has been formed; and I find in a Report of Messrs. Stephenson, Civil Engineers to the Perth Navigation Commissioners, the following particulars with reference to the improvement of the navigation of the river Tay, which I have no doubt will prove interesting to those who have not seen the Report.

In the prefatory notice the improvements already accomplished are shown; "Firstly: a considerable deepening of the water-way, by which steamers of small draught can ply even at low water, and vessels drawing 14 feet of water can come up to Perth in one tide. Secondly, a cleaner and freer passage for the tidal wave has been obtained; by which means it now begins to flow at Perth fifty minutes sooner than before, while the duration of high water is undiminished. These increased facilities have produced a considerable increase in the tonnage and trade of the port.

"In 1833, the registered tonnage was 5,403. The number of vessels of 100 tons and upwards being 12 tons; and the largest 144 tons. In 1844, the tonnage was increased to 8,646, including 22 vessels from 100 to 150 tons; 7 from 150 to 200; 6 from 200 to 300; and 2 above 400 tons register. Many large vessels from foreign parts are now in the habit of resorting to the harbour, instead of unloading, as formerly, at Newburgh; and are, in many instances enabled to reach Perth in one tide from the German Ocean."

What follows is an undeniable evidence of the benefit to the state from such local improvements; and may, perhaps, induce the Government to assist by a money loan, when needed, the efforts of local authorities desirous of improving river navigation and attached ports. The customs, which, before the commencement of the statuary operations, produced only £2,969, have, on an average of the last five years, produced the sum of £16,837; and were, in one year so high as £25,767.

The completion of the above named improvements, it appears, cost the Harbour Commission upwards of £53,000.

The further improvements contemplated are—For the lower part of

the river the formation of a line of conservation for the margin of the Channel, by the erection of a system of rubble-walling, instead of the present irregular and broken line of shore, formed by the protrusion of jetties into the stream. The advantage expected from such disposition of walling are thus stated :—"From our knowledge of the effects of similar operations on other navigations with which we have been professionally connected, we have no hesitation in saying, that were such a wall as we propose, carried in a judicious line of direction, from a point near the junction of the Earn to a point at or near Flisk Point, the level of the low water between Newburgh and Balmbreich would soon be lowered, and the present obstruction to the passage of the tidal wave being removed, its propagation would be greatly accelerated. This change would, of itself, operate beneficially on the whole line of navigation to Perth, at which place the first of flood would be hastened, in proportion to its earlier appearance at Newburgh, while the scour would be rendered more effective." In connection with that work, the continuance of dredging the upper part of the river is recommended, the beneficial effects of which on the channel of the Tay, are still far below their limits. By these means, a depth of from 19 to 20 feet at high water spring tides up to Perth would be obtained: and by continuing these operations, the depth would be further increased. The backwater of the river would not be interfered with by these improvements. The estimated cost—a rough approximation—is stated at from £45,000 to £50,000. In conclusion, Messrs. S. state that the establishment of wet docks at Perth, as proposed in the report of 1834, and partially executed, could not fail, in connection with such an improvement in the navigation as they have pointed out, to be attended with great advantage both to the city of Perth, and the whole surrounding district of country.

To the Commissioners, I doubt not, you will join me in saying, "Go on and prosper:" for ultimately, under such clever directors, we cannot distrust that prosperity will follow.

A SEAMAN.

To the Editor, &c.

HARBOURS OF REFUGE.

To the Right Hon. the Lords Commissioners of Her Majesty's Treasury.

We, the undersigned, harbour commissioners, appointed by your lordships minute of the 2nd of April last, whose names are hereunto subscribed, have the honour to report to your lordships the result of our proceedings in pursuance of the objects pointed out to us in that minute.

We entered upon our important and difficult duties with a deep sense of the responsibility under which we should have to offer our opinions.

This feeling was nothing in its force during our visit to the south-east coast, nor is it diminished on a review of the circumstances under which we have now to present for your lordships consideration proposals which, if approved, must necessarily involve large sums of the public revenue.

The Treasury minute under which we act gives for our guidance three principal objects, viz. —

1. The formation of ports of refuge for the safety and convenience of vessels navigating the British Channel.
2. That these should be calculated to become, in the event of hostilities, the stations for ships of war.
3. The consideration of expense, as compared with the public advantages likely to result from the construction of such works.

Our instructions do not bind us by any strictly specific limits. We are told, "if we think one harbour in the channel is not sufficient, we are at liberty to extend our inquiries accordingly."

We avail ourselves of the scope thus given to us, and being unanimously of opinion that one harbour would not be sufficient, we proceeded to the extreme west of the narrow part of the channel at Portland, and eastward to Harwich, which, though not strictly within the limits of the channel, is on the south-east coast, and forms an important termination to our line in that direction. Any less comprehensive views of the coast would have fallen short of the spirit of your lordships' instructions.

The surveyors placed at our disposal by the Admiralty were directed to make detailed surveys of the anchoring ground at each place, and also to ascertain if any change had occurred since the publication of the last charts.

This service has been admirably performed by Capt. Washington, and the officers of her Majesty's surveying vessel the *Blazer*, at the eastern ports, and at Portland with equal skill by Commander Sherringham, and the officers of the *Fearless* surveying vessel.

Throughout our proceedings we have received unlimited assistance from the Lords Commissioners of the Admiralty, and amongst other advantages, their lordships have permitted us to refer, as occasion required, to their hydrographer, Captain Beaufort, whose ready help has been most useful.

We obtained every information we could desire from the officers of the Cinque Ports, from the officers of the Royal Engineers, the collectors of customs, and from the officers of the Coast Guard.

The report of the select committee of the House of Commons on Shipwrecks, to which we are referred by your lordships, has been read by each member of the commission, and the copious information contained in that volume, is well worthy the attention of all who may at any time be engaged in considering matters relating to the ports and maritime interests of the kingdom.

It was not to be supposed that an inquiry of such a nature as the construction of harbours could be entered on without bringing forward many intelligent persons with propositions of various kinds, and the appendix shows their names, and the nature of their proposals.

To each individual we have given a patient hearing, as our minutes of examination fully testify, and every fair consideration has been bestowed on their plans.

We invited the chairman of Lloyd's and the chairman of the Shipowners' Society to meet us, or to delegate others to state the opinions of those great mercantile bodies, with reference to the positions they consider best as ports for the shelter of their trade.

We have also had before us every class of persons who were thought capable of affording information, including several eminent engineers; and in order to guard against the often misleading opinions of residents at the different ports, we have examined many others practically acquainted with the various places, whom we believed to be unbiassed by local partialities.

The examination of persons so varied in their pursuits could not but afford much useful information; it has, however, been no light task to deal with the conflicting opinions they offer.

With these preliminary remarks, we proceed to lay before your lordships, the result of our deliberate consideration of the whole of the circumstances which have earnestly occupied our attention.

Foreness.—We proceeded in the first instance to Foreness, near the North Foreland, the site which the harbour commission of 1840 recommended as the place next in importance for an artificial harbour, giving a preference first to Dover, and secondly to Beachy Head.

It is right to name the persons who composed that commission,* in order that their opinions may have the influence justly due to the high distinction they held in their different professions.

The commission of 1840 had specific limits assigned to its operations—namely, "To visit the coast between the mouth of the Thames and Selsea Bill, to examine the ports with reference to their being available as places of shelter for vessels passing through the Channel, in cases of distress from weather, and also as places of refuge for merchant vessels from enemies' cruisers in time of war; and more especially as to their being made stations for armed steamers employed for the protection of our trade in the narrow parts of the Channel."

We quote this instruction both with reference to what we have to state respecting Foreness, and to other matters we shall have to mention in the course of our report.

Foreness stands well in the fairway of the traffic between the Thames and the Downs, and would, no doubt, if converted into a harbour, frequently prove to be a very convenient anchorage for outward-bound vessels caught off the Foreland by strong south-west gales, and for homeward-bound ships meeting with adverse winds.

The commission of 1840 give weight to their proposal in favour of Foreness, by observing that a harbour there "must be regarded as one of refuge for vessels navigating or stationed in the North Sea," but if their instructions had not precluded them from the consideration of Harwich, we think they would have suggested the improvement of that splendid natural harbour, at a small expense, rather than have proposed a large outlay of money in constructing one at Foreness.

Nothing can be more manifest than the fact that Harwich, as far as position goes, being actually on the shore of the North Sea, is the proper place for a squadron of steamers on that station, as well as for a harbour of refuge for merchant ships; while the neighbouring anchorage in Hollesley bay is favourably suited for ships of the line.

On this account it seems to us unnecessary to construct a harbour at Foreness, and we think the commission of 1840 would have taken the same view of the subject, if Harwich had come within their examination.

Ramsgate.—Our next visit was to the port of Ramsgate, a mere creek in 1748, but now of such capacity, that in the last three years, the number of vessels which arrived in that harbour amounted on an average to 1,600 sail a year, exclusive of fishing craft, town boys, and the daily voyages of steamers.

Ramsgate Harbour is kept clear partly by its backwater, and if ever the basin at the west end, designed by the late Mr. Rennie, be carried into execution, it will give increased power of backwater, and enable the port to receive many more ships.

The improvement of Ramsgate harbour is the result of vigorous efforts by the managing trustees, and their success, which cannot be too highly appreciated, is forcibly exhibited by contrasting its present increased utility with the state stated by the celebrated Smeaton, who says that the number of vessels that entered the harbour in the year 1730 amounted to 29 sail; 1785, [illegible], whereas in the last three years it appears on the evidence of the harbour-master there arrived in the port in 1841, 1,543; 1842, 1,652;

* Sir James Gordon, K.C.B., Capt Vidal, Admiralty-surveyor, now commanding her Majesty's surveying vessel the *Styx*; Lieutenant Colonel Thompson, Royal Engineers; Captain Drew, an elder brother of the corporation of Trinity-house, Mr. J. Walker and Mr. W. Cubitt, civil engineers.

1843, 1606; average 1,600 sail. Of the number of vessels that arrived in 1844, 31 gave an average of 457 tons each. And when it is recollected that more than two-thirds of the trade of Great Britain is carried on in vessels under 400 tons, it shows the advantages the mercantile marine derives from this port in connection with the Downs.

The harbour-master states that in the winter of 1832 there were at one time 434 sail in the port, and if the additional basin before alluded to at the west end be made, there will be room for upwards of 600 sail.

It will be an improvement if the approaches and entrance to the harbour can be deepened by the use of dredging vessels, or other means applicable to the purpose.

The Brake, or Small Downs.—The next place we have to notice is "The Brake," within which is the anchorage called the "Small Downs".

It is here that a harbour has been proposed by Sir J. H. Pelly, deputy-master of the corporation of the Trinity-house, one of the committee of management of Ramsgate Harbour, and a member of this commission. Any suggestion of this nature, coming from such a quarter, could not fail to engage our best attention.

The Small Downs is an anchorage of considerable extent, lying between the Brake Sand and the shore northward of Deal. The holding ground is good, and it is the general anchorage of the smaller class of merchant vessels, having occasion to bring up in the Downs, thus leaving the Great Downs more clear for ships of a larger draught of water.

The Brake Sand is about five miles in length, with a depth upon it at low water spring tides, of from 3 to 12 feet. It shelters the Small Downs from the east in the same way that the Goodwin Sands shelter the whole of the Downs for a distance of nine miles.

We have had before us an elaborate plan, and a very full report, addressed to the trustees of Ramsgate Harbour, respecting a design prepared by Sir John Rennie, by which it appears that the breakwater he proposes to construct, is to be five miles in length, at an estimated cost of £3,280,000. This plan is to convert the Small Downs into a close harbour, by constructing a solid work along the spine of the Brake, to be brought up two feet above high water mark. There is, however, a modified suggestion of Sir John Rennie, which, if adopted, would reduce the cost to £1,300,000.

Another proposition for a work on the Brake Sand is by Captain Vetch, late of the Royal Engineers, by which he proposes to make a sheltered anchorage within the Brake at a cost of £85,000.

A third by Capt. Sir S. Brown, R.N., also for the Brake, the details of which will be found in the evidence.

It has lately been shown by an Admiralty surveyor, Captain Bullock, that the Brake Sand has gone about 700 yards bodily in shore. The Trinity-house, on obtaining the survey from the Admiralty, shifted the south and middle Brake buoys, and issued a printed notice to all mariners of this remarkable change.

The commission of 1840, which included the late Capt. Drew, one of the most able men of the Trinity-house, say, in reference to the expediency of enclosing the Small Downs, that "the magnitude and extent of such a work, which would require a breakwater and pier of upwards of five miles in length, the small depth of water at the northern entrance, and the uncertain nature of the foundation, induce us to abandon the idea of a harbour of refuge at this place."

According to the spirit of your lordships' instructions, and strictly in conformity with those issued by the Admiralty to the former commission, we have in preference directed our attention to the narrow part of the Channel, where the navigation is dangerous to ships contending with adverse winds, and where in war the risk of capture would be greatest; it is there that we are to provide harbours of refuge for merchant ships, and suitable ports to enable our

vessels of war to maintain their stations in order to give protection to the passing trade.

A harbour in the Downs can only be for ships that have actually passed all the risks of the narrow part of the Channel, or for ships waiting to commence their voyage.

For these reasons, and considering the Downs in its present state an excellent roadstead, with Ramsgate harbour immediately adjoining, capable of containing at one time upwards of 400 sail, and which may be made to receive 200 sail more, we do not feel ourselves warranted in proposing any outlay of the public money in the Downs.

(To be continued.)

Mindoro Passage.

We are indebted to the kindness of Ardaseer Hormusjee, Esq., for the following letter from Captain Isaacson, of the ship Inglise, in reference to the geography of the Mindoro passage. The information it conveys is important as well as clearly put. Were officers of vessels pursuing unusual or intricate routes to take the care Captain Isaacson has done to put his observations on record, the field of hydrographical research would speedily be most beneficially extended, to the vast advantage of navigation. Shipowners should, on all occasions, give a preference to officers who show in this manner that they can use their eyes: the man who observes what he passes, and notes what he observes, has established a presumption in his own favour, which should not be overlooked.

Dear Sirs,—As our late route from China by the Mindoro Passage is becoming more frequented, I have much pleasure in tendering the following observations which I had the opportunity of making, and (as the voyage is generally considered somewhat intricate) should you deem them worthy of being published to the mercantile world, you are at liberty to do so.

We left Macao Roads in company with the Faize Rubahny on the 18th July, and experienced remarkably fine weather as far down the Chinese Seas as lat. 16° N. and long. 116° 20′ E., when it became squally and threatening weather, with a high swell to westward; however, we experienced no further inconvenience or damage, than the splitting some of our sails, and four successive days without observations: this proved unfortunate, as we by D.R. imagined ourselves to the southward of the Apo Shoals, and expected to make the land of Busvagon, instead of which, the current had set us so considerably to the northward, that when we made a landfall, it proved to be Point Calavete on Mindoro Island: we tried to work to the southward, but the weather continued so bad, that we bore up for Mindoro, to work down between that island and the Apo Shoals: these dangers we saw on the 31st. I would first suggest that the island of Mindoro should be described as generally very high and mountainous. Horsburgh only remarks that Mount Calavete may be seen a considerable distance in clear weather, whereas the whole of the island is very high throughout, which made me think (Mount Calavete being obscured) I had made the group of Calamaines, which are described generally as high.

There are two islands said to be off Point Pandan on the island of Mindoro, which lie at least four or five miles northward of the point as laid down, and are two low islands covered with trees. On the 1st of August we had fine weather, and were off the south-east of Mindoro, and off the islands off Ambalon and Ylin; on the 2nd we cleared the all important danger of the

"Camden" Shoal, which I am satisfied is laid down in the new charts at least 10 miles to westward of its true position; however, I cannot do better than give an account of my own proceedings, as they must prove a sure and safe guide for all future navigators.

We had the wind veering from southward to S.W. After weathering the Apo Shoals, we stood well over to the westward towards Busvagon, which enabled us at daylight on the morning of the 2nd to lay well to windward of Ambalon and Ylin. A fresh breeze sprung up about S.S.W. We lay down S.E., and by not bringing the westernmost island to the westward of N.N.W., until "Quiniluban" hove in sight, bearing S.b.W. to S.S.W., I felt confident in pushing through the passage without making a tack, (the Faize Rubahny following in our wake). Notwithstanding our running direct over the Camden Shoal as laid down, my impression is, that we saw the spot where that unfortunate ship was lost about two or three leagues to eastward of us, the true situation of which I make to be lat. 11° 51′ N. and long. 121° 21′ E. Soundings were obtained of 35 fathoms in running the route described.

Of course the above position of the Shoal is but imaginary; all I can vouch for is, that it does not exist as far westward as now placed in the late edition of Horsburgh's Charts. Proceeding towards the island of Panay, we passed an island not laid down in Horsburgh's Charts. I make it about lat. 11° 38′ N. and long. 121° 45′ E., and may be seen three or four leagues off from the deck of a large ship. I would next remark, that the danger called the Dry Sand should be described as a low Sandy Island, much covered with trees, and very picturesque; indeed far more so than the well known Tree Island, at the entrance of Singapore Strait.

I will now proceed towards the Straits of Bassilan, which we passed safely through on the 9th. I have one or two observations to make relative to these Straits. In the first place the islands called the "Sangboys," are laid down at least 4′ too far to the northward, and I would defy any stranger to discover the island of "Santa Cruz" until he had fairly passed to the eastward of it, there being no description of it whatever in Horsburgh. The following may be useful: It is a long, low, woody island, on a level with the Mindanao shore; it reminded me much of Pulo Cocob, which is on the south part of Asia, off Sanjong Balons, only there we have a difference of colour to distinguish it, which Santa Cruz has not. There is another low island similar to it, but I could not distinctly make it out. With regard to the navigation of these Straits, nothing can be more simple: there appears to be a reef bearing S.W. of Santa Cruz, six, and not twelve miles to westward, as the Chinese Repository has it down. The route I pursued was standing directly over to Bassilan, before I hauled to the eastward, and stood close in shore along the island; when the town of "Samboangan" on Mindanao bears north, I believe you may stand in, working well over towards Santa Cruz Island without fear.

On the 16th we made the islands of Celebes, and (from the winds prevailing at S.W.) far too much to the eastward, as we were not only becalmed for five days, but had also an adverse current setting us to the eastward. To prove the prevalence of the winds at south-westward, there were three ships, one brig, and two schooners in a like dilemma. I would here suggest, as a hint for the future, (and a course I would myself adopt), that after getting to the southward of a doubtful rock laid down in the Celebes Sea, to make westing as far as 120° E. rather than care for southing; that is, I would always, with the wind at S.S.W., prefer laying west to S.E., the contrary to which I recently adopted, and fear lost ground by it.

I think I must already have exhausted your patience; however I have still one more observation to make, and that I consider a most important one, namely, that the whole of the northern part of Celebes is laid down at least from 20′ to 30′ too far to the westward: this I proved not only by three good chronometers, but also by some excellent lunar observations taken by

myself and officers on two successive days. I consider this mistake to lie as far to the southward as Cape Samsel: further south than that I cannot vouch for. We passed through the Macassar Straits into the Java Sea on the 29th, where we experienced very light and variable winds, but delightful weather, which determined me on the 1st September to proceed to Batavia instead of Anjer, understanding from those who had been there before, that a ship was supplied far better and more expeditiously there than at the latter port.

We anchored there on the 4th instant, at 3 p.m., and left at daylight on the 7th, experienced a splendid run through the various shoals, and passed Anjer at 4 p.m. on the same day.

The Peter Borradaile parted company with us on the 31st August, proceeding to Singapore via Carimata Passage.

I remain, dear Sirs, faithfully your's,

HENRY S. H. ISAACSON.

Ship Inglis, Bombay Harbour, 14th Oct., 1844.

To Messrs. R. and J. Skyrmnger.

ROYAL EASTERN YACHT CLUB—*Edinburgh and Leith.*

SCOTLAND, as we have already stated in the present volume of the *Nautical*, can now boast of possessing not two Yacht Clubs, viz. the Royal Northern* and the Royal Eastern, the former having their rendezvous in the Clyde, the latter in the Frith of Forth. The Clyde Club, with its list of 49 sail, was noticed in the Nautical for October 1844, p. 634. In regard to the origin of the Edinburgh and Leith Club, we may premise that, by a copy of the *Regatta Regulations* for April and May, 1836, now before us, it appears (pp. 14, 33,) that a meeting was held at Edinburgh on the 21st of December, 1835, when it was resolved to establish an Association for the purpose of promoting aquatic amusements and competitions in sailing and rowing matches among the seafaring population within the Frith of Forth. On the same date were appointed office-bearers and a Committee to carry the necessary arrangements into effect. On the 30th of March, 1836, the Club was first constituted and called the Eastern Regatta Club. In a few weeks afterwards His Majesty William the Fourth became its Patron, and the name was thereupon changed to the Royal Eastern Yacht Club, which name the Club still retains.

The maiden regatta commenced on Thursday the 14th of July, 1836, and continued three days, and among other matters we remember that the Forth and Clyde Canal Company liberally granted permission for all yachts going to or from the rendezvous at Leith, to pass through the canal free of toll. Altogether, what with the racing, and the public breakfast, and the dinner, and the ball, "all went merry as a marriage bell." On this the first start of the Royal Eastern Yacht Club the winning yachts were the Gleam, 30 tons, [illegible] Esq.; the Wasp, 40 tons, Sir R. Harland; Clarence, [illegible] Esq.; Fresh, 11 tons, R. Morris, Esq.; and Lufra, [illegible] beating seven opponents. There were also [illegible] matches among fishermen and others for various prizes.

[illegible] the other regatta in the Frith of Forth, some nine

* The Secretary of the Royal Northern Yacht Club is Mr. J. Allan, of 120 [illegible] Glasgow; the Secretary of the Royal Eastern Yacht Club, [illegible] 36, Rankeillor Square, Edinburgh; the Secretary of the [illegible] Yacht Club is Mr. Walter James, Penzance; and the Secretary of the Southern Yacht Club is Mr. J. Knight, Southampton.

[illegible] the first match race was by the Clarence in the course [illegible]

years have nearly run out, and the Royal Eastern Yacht Club, though certainly not so well supported as it ought to be by the "Modern Athenians," still "holds its own," and, moreover, "flouts the sky" with the blue banner assigned to it by the Admiralty Warrant of June 30, 1836.

The Burgee worn by the Club is also blue with a St. Andrew's Cross at the head of the flag, and an Imperial Crown in the centre of the cross, (*white on a red field.*)

Her Majesty the Queen patronizes this Club; his Grace the Duke of Buccleugh is Commodore, and the Earl of Roseberry, Vice-Commodore; a most efficient Committee and other officers head the list of members, whose names, however, we must withhold till the list of yachts for 1845 is corrected and put into circulation, and the date of the next regatta fixed. In concluding our present notice of the Royal Eastern Yacht Club we may state, that the entrance fee is but two guineas, the annual subscription one, and that any of the readers of the *Nautical* who may desire further information will ever receive the greatest attention from the gentleman who now officiates as Secretary, and whose address is given in our note. The Frith of Forth Regatta will probably come off at the end of July or the beginning of August, if we may rely on the rumours that have reached us.

Nautical Inventions.

Sir.—You will pardon me for addressing these lines to you; their perusal will absorb some of your valuable time, which might be better employed.

I am a subscriber to the *Nautical* from its beginning, and have found much valuable information in it. No seaman should be without it.

At your recommendation I have adopted Rodger's anchors since 1838, and assure you never found any better; I have tried them on rock, clay, sand, and mud, and have found them on all kinds of ground equally well; they never come home an inch. I am making my grapnels, which I am obliged to use occasionally on Rodger's principle; they also answer better than those of the old form. Even in point of economy Rodger's anchors are to be preferred, for under some circumstances, I have taken them 10 per cent lighter than those of the old form, and they hold better. I would not have an old mud dragger on board for half the price.

An observation on them which I have not found in the *Nautical*, is, that when a Rodger's anchor comes home on hard ground, it is fairly dragged through the soil, instead of which an old form anchor comes above ground, and jumps along, till meeting a small elevation it takes again, and by the large flue is much prevented from going quickly into the ground.

Before reading thus far, you have observed already that I am a foreigner, and as such, I have some requests to make to you.

First, when you favor us with the invention of some new instrument, please to put the price of it down, and where we might get it.

Also please to give us the prices of new books and Admiralty charts, so that we may know what we have to pay. This will bring our money to England, and your knowledge to us; in this way our mutual interest will be forwarded.

Further, I should wish to see more new inventions taken notice of, as amongst others, of a valuable way of preventing the windlass to go over-head, or throw the palls out, invented by a collier-captain of Sunderland. It is as simple as useful in practice; it also prevents the shaking of the vessel when the chain is paying out, which motion is very disagreeable to passengers; besides it is very cheap, not above £10, according to the size of the vessel, riding chocks becoming almost useless. It is so useful, and yet so little known.

Also I should wish to hear arguments in favour and against iron vessels, it is a subject well worth discussing in these days.

If you think proper to publish some of my observations, you will please to translate them into good English.

I remain, &c.,

To the Editor, &c. AN ADMIRER.

("An Admirer" would oblige us by sending his name and address to the ED.)

MERCHANT SEAMEN'S ACT.—In previous numbers we have given some particulars of this Act, which came into operation on the 1st of January last. But there is one of the clauses of this act which effects a revolution of very great importance, and entirely in the face of the dictum of some of the most eminent of our judges, both of the past and present period. In the event of the loss of a vessel by shipwreck, the law, as heretofore laid down, deprived the seamen of all claim for wages, except to the extent that freight was earned. The legal phraseology was, that freight was the mother of wages, and by induction, where the mother had no existence there could be no legitimate offspring. Under this dictum of the judges, the greatest conceivable hardship was often inflicted on the most meritorious and deserving men, such as when a ship, on her return from a long voyage, was wrecked in the Channel, or in the very mouth of the port of homeward entry, unfortunately not a rare occurrence. In all such cases, whatever may have been the amount of wages due, the seamen had no legal claim for wages from the port where the cargo then on board was taken in.

The reasons given in justification of this dictum by the judges—reasons more than once elaborately laid down by some of our eminent jurists, were, that the strongest possible incentive should be held out for the men to exert themselves to the utmost for the safety of property so much exposed to peril. To carry this principle to its climax, wages were excluded from legal insurance, whilst the ship, freight, and cargo were all within the pale of that form of protection. A vessel might embark a cargo from the most distant part of the globe, and the ship, cargo, and freight be insured on the homeward voyage. This is, indeed, the uniform practice. Suppose the vessel twelve months, or any portion of that time, on her passage, and at length lost upon our own shores, every individual having an interest in the property possesses the legal right to be indemnified to the full extent for which he is covered; but the seaman, who forfeits all claim to his wages, and most generally under such circumsiances with the loss of every article of his clothing, if he escapes with life. The anomaly and marked injustice of such a case is then most apparent.

The seaman is told, in the first instance, that freight is the mother of wages; that he can have no legal claim to the latter until the former is earned. He is further told that he cannot be allowed to provide against such a contingency as the loss of the ship by insuring his wages. The shipowner, *per contra*, is allowed to insure not only the ship but the freight, upon which the wages of the seamen depends, and in the event of loss obtains full payment for both, and sends the seamen adrift without one farthing as indemnity. The amended act to which we have alluded has at length put an end to this monstrous injustice, which could only have been tolerated so long by the sanction given to it by the perverted notions of a past period of our social history. In cases of wreck, in future, if the seaman exerts himself to the utmost of his power to save the ship, cargo, &c., he will have a legal right to all the wages due to him, without reference to whether the vessel has earned freight or not.

ISLAND OF ASCENSION.—The little Island of Ascension, according to late accounts, is fast improving under the indefatigable exertions of the Marines

of the establishment. Commander Morrell, R.N., then acting, but lately confirmed to the command of the island, was, on the 25th of November last, living on board H.M.S. *Tortoise*, while Capt. Fraser, of the Royal Marines, under the Commander's authority, was carrying on the works on shore. The working parties were cleaning and deepening the turtle-ponds, making them capable of holding full 1500 turtle; and we are happy to say these agreeable reptiles were appearing on the coast, and a good season was expected. There were about 1000 tons of water in the old tanks, despite the constant demands of the guano ships touching at the island. A large tank above Dampier Springs (where the land-drain, which refreshed that voyager of old, has already been directed into tanks), is in contemplation. The new work is to hold 2000 tons of water, and from its situation there is every probability of its being collected by the tropical showers beating against the rocks, the face of which the Marines are now scarping. A new church has been erected within the last six months, which will hold more than three times the strength of the present garrison, and several houses for the officers, and stores and sheds for coal, &c. have been built. Altogether, the greatest activity is displayed in this little community. Ascension promises, more than ever, to be a useful rendezvous for shipping in this part of the world. The island and squadron on the coast are healthy.

Island St. Paul.—Amsterdam, Jan. 23.—Extract of a letter from Batavia, dated Oct. 4, 1844—"On my voyage out, being off the island of St. Paul, I went on shore in a boat to make observations. We heard at St. Paul that that island, and the Island of Amsterdam, were taken possession of on the 23rd of July, 1843, in the name and at the instance of Adam Mixostawsky, a Polish exile, who now exercises his authority on both islands. The establishment consists of 56 persons, among whom are 6 soldiers and 20 negroes and negresses who have the care of domestic affairs; the men are employed in the whale fishery,—the oil is boiled in the island, and four vessels (schooner and brigs) are constantly employed in conveying it to Bourbon."—*Times*.

Oranges from Bermuda,—At the meeting of the Horticultural Society, held lately, Dr. Lindley exhibited some oranges of fine quality from Colonel Reid, Governor of the Bermudas. On account of the probable destruction of orange orchards in the Western Islands, the attention of the local government had been earnestly turned to the subject, and it was probable that this fruit would in future form an extensive article of import from this colony. The quality of the fruit is excellent.

Prevention of Dry-Rot in Timber.

Sir,—On this subject a communication of mine appears in the *United Service Journal* for 1831, (Part 1, p. 368,) wherein it is stated that, "it had been found from long experience, that the water in the reservoirs for supplying the precipitate pits at the copper-mine works at Parry's mountain in Anglesea, has the property of preserving timber from decay and dry-rot in a surprising manner, by the short process of steeping it therein a few weeks only; and that, it has such a powerful effect in hardening the wood, as to blunt the sharpest tools. It consequently, is found necessary to shape and fit the wood completely for the use intended, before it is put into this water for seasoning." The water of Parry's mine is impregnated with sulphuric or vitriolic acid.

The communication has also the following remarks: "The Peat bogs of Britain and Ireland seem to offer receptacles for our ship timber, that would,

without further application or expense effectually prevent its decay by the dry-rot."

My opinion is derived from the well-known anticeptic qualities of peat in its natural state; so powerful, indeed, as to have preserved and hardened wood to an astonishing degree, and that for a period, which, although unknown, may be calculated at more than a century, and in some instances, perhaps, for many hundred years. It has also been found to prevent the human body from decay, and to have brought the *ipidermis* into a state resembling tanned leather,—no doubt, therefore, can be formed of its anticeptic qualities in ligneous and animal bodies whilst immersed or imbedded in it; the test for consideration is that, of bodies steeped for a given time, retaining this preservative quality after being removed and dried.

Has the tanner's process been ever tried upon wood?

The bane and antidote often go hand-in-hand; are often co-existent in the same body;—heat repels heat, and snow produces warmth; the very juice extracted from wood may thus serve to preserve it from decay.

Would not the steeping of flax and hemp in tan pits, prevent mildew (which is supposed to proceed from the minute parasitical fungi that produces dry-rot) in canvas, or premature decay in rope?

There seems no doubt that the gallic acid of oak assumes a purple tint from contact with iron; but I have seen it when the green bark has been stripped off which iron has not touched; perhaps the air has something to do in the matter.

The information, alluded to, was obtained by a Naval officer from the Rev. G. Williams of Rhicolas in North Wales, and the communication I gave with the initials "H. O." which I shall not alter here. H. O.

Pirates in the Mediterranean.—Advices were received at Lloyd's 5th of Feb., 1845, from their agents at Gibraltar and Patras, reporting the presence of pirates in the above seas. The agent at the former port states, that the Spanish brig Sorpresa, bound from Cadiz for Laguayra, had returned to Cadiz, the Captain reporting that when he had proceeded as far as Cape St. Vincent, three piratical vessels—a bark, brig, and schooner, hove in sight, and the brig gave chase to him, but he managed, after being chased for some days, to re-anchor in Cadiz bay.

The agent at Patras reports that an Ionian vessel, with 2000 dollars on board, on her way to the Gulph of Corinth, to load currants for a British merchant, anchored in a creek, through stress of weather, where she was waylaid by a pirate, and attacked, but the crew repulsed them; the clerk in charge of the money was, however, seriously wounded.

On the above news reaching Gibraltar, Her Majesty's ship Scout, the Swedish corvette Karlskrona, and the Danish brig of war Mercurius, all proceeded to sea to cruise in the above neighbourhood. In the mean-time it will be well if all merchant vessels bound up the Mediterranean be provided with arms and ammunition, in case they should fall in with them.

[The above account is taken from the *Times* of Feb. 6th. We presume that the piracy at Patras is the one referred to in the February number of the *Nautical*, p. 99. But to have a piratical *division* consisting of *a schooner, a brig, and a bark* cruising in company off Cape St. Vincent, is indeed an existing daring novelty, that was little to be looked for in this the reign of Queen Victoria!!!]

Submarine Currents.—At the *Academie des Sciences*, Paris, M. Arago presented in the name of M. Amie, two instruments, one to ascertain the direction of sub-marine currents, the other to measure their speed.

These instruments were accompanied by an account of several experiments which had been made with them. It states, amongst other things, that the greatest speed of the currents on the coasts is, on the coast of Africa, between Algiers and Bona, and not, as is generally supposed, between Gibraltar and Algiers; and that in the Straits of Gibraltar there are three parallel currents. Near the coasts the direction is from east to west, whereas the central current proceeds constantly from the west to the east; the latter is 7 miles wide between Trafalgar and Cape Spartel. The width of the Strait at its narrowest part is 12 miles; between Trafalgar and Cape Spartel it is 27 miles; and 15 miles between the Point of Europa and Ceuta.

The Great Britain Steam Ship.

Shortly after the Great Britain had taken up her station at Blackwall, Capt. S. Lushington, on behalf of the passengers who had come round from Bristol in her, presented Capt. Hosken with the following testimonial; and, in doing so, said it was with extreme pleasure he fulfilled the duty that had thus been imposed upon him.

"*On board the Great Britain Steam Ship,*
"*River Thames, Jan.* 26, 1845.

"We, the undersigned passengers on board the Great Britain steam ship, on her experimental voyage from Bristol to London, having witnessed her performances during a stiff gale and a heavy sea, and amidst generally unfavourable weather, feel called upon to express our conviction of her great length being no detriment to her sailing qualities and seaworthiness; and of the great advantage of the application of Mr. Smith's screw; as also our sense of the skill, attention, and urbanity of her commander, Lieut. Hosken, R.N., and the good conduct of her officers and crew.

"We further beg to express our high sense of the spirited conduct of the company by whom so great a monument of commercial enterprize was designed and carried out; and to congratulate them and the engineers and artizans employed in her construction, upon the success which has attended their labours, as evinced by the results of a voyage so well calculated to test her powers as the present has been.

"Stephen Lushington, Captain, R.N., A. Fairbrother, M.D., William Henry Gore Langton, Joseph Reynolds, R.Y.C., John Reynolds, Isaac White, J. H. Brown, Commander, merchant service, Edward James Maude, C.E., John N. Sunley, William Carpenter Evans, William Roughsedge, Charles West, Henry James Mills, Thomas D. Taylor, George F. Powell, J. Walters, Edmund J. Maybury, James Lovell, John Gover Powell, Christopher Hill, E.I.C.S., Alfred Honnywell, George Pycroft, M.R.C.S., William Hernniman, J. Hammonds, C.E., William Cook, P. Pritchard, C.E."

The official gentlemen on board who were sent by the Admiralty, having to make their own reports, could not, of course, sign any other document.

Before the passengers were permitted to depart, they were hospitably entertained with another substantial and excellent dinner. After dinner, though no regular toasts were given, it was impossible that the company should separate without expressing their deep sense of the skill, urbanity, and attention of Capt. Hosken, their high opinion of the ship, and the pleasure they had received from the voyage, and the thanks which they felt were due to the public spirited company by whom she had been built. Many, and warm also, were the congratulations offered to Capt, Claxton, so long the active and indefatigable managing director of the company, to Mr. Brunel, the consulting engineer, to Mr. Guppy, appointed superintending engineer in 1841, and last and not least, to Mr. F. P. Smith, on the trium-

phant result which had crowned their labours. In the course of the conversation which ensued, Capt. Claxton said, that as the company to whom the Great Britain belonged, had sent to sea the fastest ocean paddle steamer, so they had now built and completed the fastest, safest, the most complete and the most gigantic screw steamer which ever floated. Nothing could have have given him greater satisfaction than the performances of the Great Britain within the last few days. It was the opinion of many others besides himself that their good ship had behaved admirably. She was the fastest steamer afloat, let the next come from where it would. She was faster then than any other ship, and during the passage they had found out a few improvements which would not fail greatly to increase her speed. A cork in the water she would always be, but a vessel of greater stability there could not be. Capt. Hosken also observed that the ship and engines would, no doubt, prove very far superior to any thing that had as yet crossed the Atlantic. He had always thought that the Great Western was the fastest ship he could possibly meet with: he still thought her a splendid vessel; but he felt convinced that the Great Western would be far surpassed by the Great Britain. The only things that he saw wanted were in matters of detail, and those would, no doubt, be completed in a manner to prove her the fastest, safest, and best ship for accommodating passengers in the world. Her speed had been proved that day with the Waterwitch. He observed that much credit was due to the pilot for the manner in which he had steered the vessel. He (Capt. H.) felt somewhat anxious himself, but all his anxiety was removed by the pilot, who, as they were coming up the river, alluding to the ship, observed, "You need have no fear at all, sir, she as manageable as a boat."

The party now broke up, and many gentlemen at once left the ship for their various destinations; none, we feel confident, departed without carrying with them many pleasurable recollections which will attend them during the remainder of their lives.

We cannot conclude this account without once more congratulating the Company and all concerned, on their most sanguine hopes, not without expressing our sincere and hearty wishes that the day will not be long distant which shall bring to them a full and rich harvest, in reward for the expenditure of so much labour, so much anxiety, so much money, and so much zeal.

Though many descriptions have been given of the Great Britain, we are induced to insert the following, as being the most clear and succinct that we have seen, and which we copy from an interesting pamphlet just published by Capt. Claxton, entitled "A Description of the Great Britain Steam Ship," &c. The pamphlet may be had at the office of the "*Bristol Mirror*," price sixpence.—

The length of the keel is 289 feet. Total length, 322 feet. Beam, 51 feet. Depth, 32 feet 6 inches. Feet of water when loaded, 16 feet. Displacement, 2,984 tons. Tonnage by Old Measurement, 3,443 tons. Plates of keel nearly one inch thick. Plates of Bottom varying to $\frac{3}{4}$ of an inch at extremes, and to $\frac{5}{8}$ths generally. Topsides $\frac{1}{2}$ an inch, and at the extreme aft 7-16ths. The ribs are framed of an angle iron, 6 inches by $3\frac{1}{2}$ inches; $\frac{1}{2}$ inch thick and 7-16ths. Distance of ribs from centre to centre, amidships, 14 inches, increasing to 21 inches at the ends.

Ten iron sleepers run through the engine rooms, gradually diminishing in number, to the fore-end of ship and under the boilers, the platform of which they support—in-midships they are 3 feet 3 inches in depth, supported by angle irons in the form of inverted arches, and a short distance from each other. She has five water-tight partitions. Stows 1200 tons of coal. 1000 tons of measurement. The engines weigh 340 tons. The boilers 200 ditto, and holds 200 tons of water.

The main shaft is 23 inches in diameter in the centre, and 24 inches in the bearings; in the rough before turned, it weighed 16 tons. It has been lightened by a hole of 10 inches diameter, and bored through. A stream of cold water passes through the cranks and this hole when the engines are at work. The screw shaft is in one long and two short or coupling parts. The part next the engine, solid, 28 feet by 16 inches diameter. The hollow intermediate shaft 65 feet, by 2 feet 8 inches diameter; the screw part is 25 feet 6 inches, and also 16 inches diameter; the total length is 130 feet, and it weighs altogether 36 tons.

The screw is of six arms, 15 feet 6 inches in diameter, 25 feet pitch, and weighs 4 tons. The main drum is 18 feet diameter. and drives 4 chains, weighing 7 tons. The screw shaft drum is 6 feet in diameter, and the weight with the pull when working is equal to 85 tons on the bearings of the main shaft. The cylinders are 4 in number, 88 inches each. Stroke 6 feet. Power 1000 horses. The condensers are of wrought iron, 12 feet by 8, and 5 deep. Under the whole space of the engines up to the top, the angle irons are doubled. The upper, main, and saloon decks are of wood, the two cargo decks are of iron. The officers and seamen are all accommodated on two decks under the forecastle.

From the ship's bottom to the upper deck, runs on either side, for the whole length of the engine and boiler space, a strong iron partition forming below the coal bunkers; and above, the servant's accommodations on one side, engineers' cabins and stokers' accommodations on the other, besides 26 water-closets. She has 6 masts, fitted with iron rigging, adopted in consequence of its offering two-thirds less resistance than hemp,—a great point going head to wind.

The plain sails of a 52-gun frigate, that is, without bunting, royals, stay-sails, and steering sails, number something short of 5000 yards of canvas, and the plain sails of the Great Britain amount to 4,943 yards. She carries four large life-boats of iron, and two boats of wood in the davits, and one large life-boat on deck; they are built according to a patent taken out by Mr. Guppy, and are able of carrying 400 people.

The staff of the company in 1836, when the determination of building this ship was taken, was as follows:—

DIRECTORS.

Peter Maze, Esq., Chairman.—Thomas Kington, Esq., Deputy-Chairman.—Henry Bush, Esq.—Robert Bright, Esq.—Robert Scott, Esq.—T. B. Were, Esq.—H. Godwin, Esq.—T. R. Guppy, Esq.—Capt. Claxton, R.N., Managing Director.—I. K. Brunel, Esq., Consulting Engineer.—W. Patterson, Esq. Ship Builder.—Messrs. Osborne and Warde, Solicitors.

The changes have been filled up by Messrs. Pycroft, John Miles, and England, the latter in the room of Mr. Guppy, who was appointed Superintending Engineer in 1841.

The pamphlet then goes on to describe the different steps taken by the Directors, and their ultimate resolution, after mature consideration, and the witnessing of many experiments, to adopt Mr. Smith's Patent Screw Propeller for the Great Britain. Captain Claxton points out the more prominent points of superiority of the screw over the paddle as being,—1st. The facility afforded in carrying canvas, inclination or heeling over not affecting the motive power of the propeller; while in a paddle-wheel craft, if sail be carried to any extent with the wind anywhere not right aft, or on the quarter, the power of one wheel is exerted on air only, while the other is to a great extent rendered nugatory by too great immersion, in spite of the dangerous tram trimming chain lockers, to say nothing of the unequal strain upon the engines.—2nd. It can only be in the highest seas that the screw partially quits the water, and then only for a few seconds at rare intervals, while with paddles the hollow of the seas constantly leave both wheels ex-

posed, and if the throttling were not attended to, the most serious consequences would result.—3rd. The breadth of beam in going into docks and basins. As a paddle-wheel steam ship the Great Britain's extreme beam. that is, from outside to outside the paddle-boxes, would have been about 80 feet instead of 51.—4th. Diminished chances from collisions at sea, where the paddle and houses constantly suffer.—5th. The difference of resistance to the wind, the paddle boxes and their appendages creating nearly one half of the whole resistance of the body, to say nothing of the paddle-box boats, and the attendant tons of iron work in such ships as have them.—6th. The ease with which sail may be carried, and the difference in effect between the two systems, if from damaged machinery, it becomes necessary to disconnect, and let the propellers revolve; and by no means the least advantage is the getting rid of the top weight of frames, shafts, wheels, &c., &c., which are represented by shafting below the centre of gravity, acting really as so much ballast in all screw ships; and lastly, the comparative security from the shot of an enemy. The pamphlet contains many other remarks, worthy of quotation; but the subject has already occupied so much space, that we must now tear ourselves from it.

(*From the Morning Herald.*)

THE GREAT BRITAIN.—This leviathan steam-ship commanded by Lieut. Hosken, R.N., will be taken into the East India Docks, in order to afford the public an opportunity of inspecting her with the requisite facility. Many thousands have visited Blackwall to see her at her moorings, and an immense number of boats were constantly rowing round the ship. It will be some days before she will be in a proper state for public inspection. Her forecastle deck has suffered from the violence of the gale, and has some defects to be repaired. Some alterations in her bows have been suggested. Although "flamming" so much above the water-line, she is very *lean* under, and the present shape of her bows is considered not to be adapted for going through the water at such a rate as it is calculated the Great Britain will move, when some improvements are made in her machinery. It is acknowledged in all quarters that the complete success of the screw propeller has been triumphantly established; and it is confidently stated that the Great Britain will attain a speed of fourteen knots, or more than sixteen miles an hour.

THE ELECTRIC TELEGRAPH.—In the presence of most of the authorities of the Portsmouth Dockyard, Her Majesty's Speech was this day received at Gosport, by means of the electric telegraph. The speech contained about 3600 letters, and was printed off as it arrived, and occupied about two hours in the transmission, being at the rate of about 300 letters per minute. Ths distance is 88 miles. The telegraph will be immediately employed for Government purposes, by the Admiralty, at whose order it has been erected.—*Times, 5th Feb.*

A NEW ARTIFICIAL HORIZON FOR SEAMEN.—The well known scientific toy called the cup of Tantalus has been applied to the useful purpose of an Artificial Horizon for a quadrant, by Commander A. B. Becher, who has already two other inventions for the same purpose, one by a pendulum and the other by a peculiarly formed tube of mercury. The Tantalus cup by the addition of very trifling auxiliary means seems likely from its peculiar control over the fluid to furnish the seaman with an horizon in rough weather at sea, and an easy means of getting a fair observation.

A Sailor's Advice to his Son, *on Entering the Royal Navy.*

(Continued from p. 89.)

Letter III.

Economy, Frugality in small Expenses, Dress, Linen, &c.

Although it is not right that the entire sum to be deposited for your current expenses should be placed in your charge, you will be furnished with small portions of it, from time to time, for the payment of your mess, and various little articles of daily consumption: and, as you will then commence a system of expenditure, the manner in which you conduct it may have such an influence on your future pecuniary affairs, as to occasion your becoming hereafter a poor or a wealthy man.

I am far from wishing you to commence by being penurious, and only desire you to be careful, that, when proper opportunities occur, you may be generous and charitable. I particularly enjoin, that you pay the first entrance money for your mess immediately, and also the regular subscriptions at the proper stated periods; by this practice you will be always entirely independent in mind, and exempt from many unpleasant reflections, which frequently drive prodigal boys, as well as men, into desperate and wicked courses. It is a beginning in the trifling articles of soap, brushes, combs, blacking, &c., which, in a midshipman, establishes the rudiments of a methodical management of his expenses. The expenses of washing, letters, stationery, keeping up a stock of clothes, &c., are of heavier moment; but if you once get into a regular habit in that minor department, it will follow in your more extensive purchases. You must keep a book in which you are to insert every item of money that you receive and pay. You must always send a washing bill with your linen, and keep a duplicate to examine it by, when returned with your things. Your chest must be constantly locked, and you must never leave any articles of dress, soap, brushes, towels, &c., lying about; but after they are used, you must deposit them safely under lock and key.

Although I hope you will always despise the foolish vanity of wearing superfluous fine clothes, and the ridiculous character of a fop; yet, you must always be as neat and clean in your dress, as situation and circumstances of duty will permit; nor will it be disreputable to you, to be even smart, and rather particular in that respect. Every description of cleanliness is so essentially conducive to the individual and general health of those confined within a ship, that it cannot be too rigidly or too minutely exacted by the officers, whose duty it is to set a proper example in that respect, as well as in every other.

Letter IV.

On duty in general. Inquisitiveness, Zeal, Alacrity, Punctuality, Emulation

You are yet too young and too inexperienced to know the extent of your own mental powers; but, from the instant that you are placed on the quarter-deck of a man-of-war, those powers must be called into action, in order to embrace every new object which may present itself, whether of the least or of the utmost importance. From the moment that you become thus enrolled in the service of your country, and subject to the discipline which that service has prescribed, the utmost exertion of your best faculties is demanded of you, and that those faculties should be directed to the attainment of a just knowledge of all the various branches of your profession, which will enable you to serve it to the best advantage. You are, then, no longer a mere individual in society, but a link in the great chain of National defence; a being training up in those principles of independent loyalty that surround the throne to assert and maintain the just rights and authority of your Sovereign, to support

her ligitimate government, and to protect the peace, and prosperity of all your fellow creatures who people his empire. Do not imagine, then, that even as a little midshipman your station is unimportant, though it is necessarily subordinate to many higher authorities. You will find that there is no rank or authority in your profession that is not subordinate to a higher; and in proportion as you feel impressed with this consideration, you will become a zealous or an ordinary officer.

Alacrity, in a general sense signifies a ready attention in receiving the orders of a superior officer, and fulfilling them with despatch. An attention to this part of your duty by a smart, punctual and correct repetition of these orders, and an immediate return to your previous station, will gain for you the approbation of your commanding officer, and will go far towards laying the foundation of your future character as an officer.

In the ordinary and extraordinary routine of your duties, incentives to emulation will be perpetually presented, but I do not wish to inspire you with that meritricious feeling for the sake of mere competition, as it is unbecoming even to attempt stepping before a messmate for the purpose of getting the better of him. Aim at excellence from a nobler motive, an earnest aspiration after superiority for its own sake—not from a selfish and invidious desire of distinction at the expense of another. As you advance in rank and experience, emergencies may arise, when the benefit of the service would require you to push before a brother officer; but such emergencies are rare, and are rather to be avoided than sought for. At the same time, I by no means intend, that you should repress, or lose, the fair and open advantage, which your superior assiduity or abilities may give you over others.

(*To be continued.*)

PITCAIRN'S ISLAND, Jan. 11, 1844.—Dear Sir.—Your letter to me dated Sept. 29, 1843, and forwarded by Capt. Richmond, is now in my possession, and I am about to comply with your wishes. The magistrate, or chief ruler, is chosen yearly by the people. On the 1st of January all the inhabitants that are eligible to vote, from 18 years old and upwards, give in their votes for a magistrate or councillor. After the magistrate is chosen, he has the privilege of choosing an assistant if he pleases. It is his duty to hear all grievances, assemble the people together, to state the object of the meeting, hear the complainant and the defendant, and commit the case to a jury of seven persons; whatever the jury decides he is to see it executed. As regards religion, I am sorry to say it is very low. Trade and traffic are all the go at present. There are some who still regard religion; and family worship morning and evening still is kept up by the major part of the families, and public service twice on the Sabbath day; but, alas! public schools and weekly meetings for perusing the Scriptures, are entirely given up by the whole inhabitants; so I may safely say religion is on the decline. The next thing you desire to know is the produce of the island; to which I reply: yams, sweet potatoes, Irish ditto, onions, plantains, corn, &c.; fruits of various kinds, such as cocoa-nuts, oranges, pine-apples, &c.; animal food, —hogs, goats, ducks, &c. In exchange; cotton cloth, (white and blue), calicoes of various kinds, cotton shirts, both coarse and fine; tea, fish-hooks, and all kinds of earthen ware, knives of all kinds, soap, &c. No vessels are owned by the people. No proper school-master, and no appointed minister, are among us. As to your last request, I am not able to inform you aright; but I believe the government here is supported by the British government.

Yours, &c. ARTHUR QUINTAL, jun.

To the Rev. S. C. Damon, Sea Chap. *Polynesian, May* 18.

Monthly Record of Naval Movements.

Apollo, troop ship, Com. Maclean, Jan. 28, arr. at the Nore; *Amazon*, 42, Capt. Stopford, left Portsmouth for Cork, Jan. 29; *Alecto*, st. v. Lieut. Com. Hoseason, Jan. 16, left Malta for Naples; *America*, 50, Hon. Capt. Gordon, Nov. 1, arr. Callao; *Acorn*, 16, Com. Bingham, left Plymouth for South America; *Alligator*, Master Com. King, Nov. 19, left Hong Kong for Manila.

Belvidera, Capt. Hon. G. Grey, (on leave) Jan. 16, left Malta for Gibraltar and England. *Cormorant*, st. v. Com. Gordon, at Callao, Nov. 3; *Cambrian*, 36, Commodore Chads, Dec. 25, at Madras.

Dido, 18, Com. Keppel, Jan. 27, arr. at Portsmouth 28th, sailed for Sheerness, Feb. 12. paid off. This vessel left Singapore Oct. 31, and and had a splendid passage home of eighty-six days from that place, including five days at anchor at the Cape of Good Hope, and one day at St. Helena. She sighted Ascension, but did not go in. The *Dido* was commissioned in Aug. 1841, by her present Captain, and has been three years in India and China. She has latterly been employed on the coast of the Island of Borneo, where she has been actively engaged against the Malay pirates. Her boats have had several very severe actions with the pirate proas, and have succeeded in destroying an immense number of them. The *Dido* sails remarkably well. She had fair winds nearly all the way home, but so strong and squally that nearly all her studding-sails have been blown away. She has not brought any freight. *Dublin*, 50, Capt. Tucker, Nov. 3, at Callao.

Espiegle, 12, Com. T. B. Thompson, Jan. 27, sailed on a cruize, Feb. 15, arr. Plymouth; *Electra*, 18, Com. A. Darnley, Jan. 2, at Vera Cruz; *Eurydice*, 26, Capt. G. Elliot, at Antigua, Jan. 10.

Flying Fish, 12, Com. R. Harris, Jan. 27, sailed on a cruize, Feb. 15, arr. at Plymouth; *Fisgard*, 42, Capt. Duntze, Nov. 1, at Islay; *Fox*, 42, Capt. Sir H. Blackwood, Nov. 10, arr. at Trincomalee.

Harlequin, 16, Com. Hon. G. F. Hastings, Jan. 22, paid off at Portsmouth; *Herald*, sur. v. Feb. 10, commissioned at Sheerness by Capt. Kellett, C. B.; *Hyacinth*, 16, Com. Scott, Jan. 10, at Antigua.

Isis, Capt. Sir John Marshall, Jan. 23, paid off at Chatham; *Illustrious*, 72, Capt. S. E. Erskine, Jan. 8, arr. at Antigua; *Inconstant*, 36, Capt. Freemantle, Jan. 2, at Vera Cruz.

Lynx, Lieut. Com. J. T. Nott, Jan. 16, left Malta for Athens. *Nautilus*, 10, Lieut. Com. Robson, Feb. 4, left Portsmouth to protect the fisheries off Brighton.

Pique, 36, Capt. M. Stopford, Dec. 20. at Antigua; *Persian*, 16, Com. Coryton, Feb. 12, left Plymouth for North America and West India station; *Penelope*, st. v. Commodore Jones, Jan. 4, left Bonavista for Gambia; *Pandora*, commissioned at Plymouth, Feb. Lieut. James Wood.

Rapid, 10, Com. , at St. Helena, Dec. 28; *Rhadamanthus* recommissioned by Mr. T. Lane, Master; *Rodney*, 92, commissioned at Portsmouth by Capt. Collier; *Ratler*, Com. Smith, Feb. 3, arr. at Portsmouth; *Rose*, 18, Com. Sturt, Jan. 2, at Vera Cruz; *Ranger*, 10, Com. Anderson, left Plymouth for Africa; *Resistance*, Com. Patey, Jan. 1, arr. at Tenerife.

Samarang, sur. v. Capt. Sir E. Belcher, Oct. 31, at Singapore; *Salamander*, Com. Hammond, Nov., at Islay; *Styx*, st. v. commissioned at Woolwich, by Com. W. W. Hornby; *Spartan*, 26, Capt. Hon. G. Elliot, Dec. 27, arr. Port Royal from Vera Cruz; *Sappho*, 16, Com. G. Hope, Nov. 25, left Mauritius for the Mozambique.

Thunderbolt, st. v. Com. G. N. Broke, Dec. 16, at Simons Bay; *Trafalgar*, 120, commissioned at Sheerness, for the flag of Vice Admiral Sir John White; *Tyne*, 26, Capt. Glasscock, Jan. 16, left Malta for Athens; *Thalia*, 42, Hon. Capt. Hope, Nov., sailed from Callao; *Thunder*, sur. v. Com. Barnett, Jan. 2, at Nassau.

Volage, 26, Capt. Sir W. Dickson, Jan. 26, arr. Plymouth, Feb. 1, paid off; *Vanguard*, 80, commissioned Feb. 7, at Plymouth by Capt. G. W. Willes. *Wolverine*, 16, Com. W. J. C. Clifford, Oct. 31, at Singapore; *Winchester*, 50, Capt. Eden, Dec. 16, at Simons Bay.

Ships Commissioned in 1844.

Acorn, 16.....Commander J. E. Bingham
Actæon, 26 .....Capt. G. Mansel
Amazon, 26.....Capt. J. J. Stopford
America, 50.....Capt. Hon. J. Gordon

Bonetta, 3 .....Com. T. S. Brock

Collingwood, 80..Capt. Smart, K.H.
Comet .....Lieut. Com. Prettyman
Comus, 18 .....Com. T. Sparke Thompson
Cruiser, 16 .....Com. E. G. Fanshawe
Cygnet, 6.....Com. H. Layton

Daring, 12 .....Com. Matson
Dædalus, 20.....Capt. M'Quhae

Eagle, 50 .....Capt. G. B. Martin
Eclair .....Com. W. G. B. Estcourt
Espiegle, 12.....Com. Thompson

Fantome, 16 ....Com. Sir F. Nicholson, Bart.
Flying Fish, 12 ..Com. Harris
Firebrand, ...Capt. Hope
Firefly .....Capt. Beechey

Hecate .....Com. Bower

Lily, 16.....Com. Newton
Lucifer.....Com. Frazer

Minden.....Master Mr. Wellington
Mutine, 12 .....Com. Crawford

Nautilus, 10.....Lieut. Com. Robson

Osprey, 12 .....Com. Patten

Pantaloon, 8 ....Com. Wilson (act.)
Persian, 16 .....Com. Coryton
Prometheus ....Com. Hay
Porcupine .....Capt. Bullock
Princess Alice ..Master Com. Luke Smithett

Queen, 110 .....Capt. Martin

Racehorse .....Com. Geo. J. Hay
Rattler .....Com. Smith.
Roila, 10 .....Com. J. A. Stephens
Ranger, 6.....Com. James Anderson
Raven, 4 .....Lieut. Com. Stephens

Superb, 80 .....Capt. Corry
Skylark, 6 .....Lieut. Com. Morris
Sparrow, 6 .....Com. Otter
Sydendam .....Lieut. Com. D. R. R. Mapleton

Tortoise, 12.....Com. A. Morrel
Thunder, 6 .....Com. E. Barnett

Vindictive, 50....Capt. M. Seymour
Victoria & Albert Capt. Lord A. Fitzclarence
Volcano .....Lieut. Com. Miller

Waterwitch, 8 ..Com. Birch

Ships Paid Off in 1844.

Ætna, 8.....Lieut. Com. Butler
Arrow, 6 .....Com. Robinson

Bonetta, 3 .....Com. E. Gray

Camperdown, 104 Capt. G. Martin
Clio, 16.....Com. Fitzjames
Comet .....Com. Frazer
Curlew, 16 .....Com. Sprigg
Cornwallis, 72....Capt. Richards

Fair Rosamond ..Com. Bullman

Griffon, 3.....Lieut. Com. C. Jenkin

Hornet, 6 .....Lieut. Com. C. Leaver

Indus, 78.....Capt. Sir James Stirling

Locust, ...Com. Lunn

Madagascar, 44 ..Capt. Foot
Malabar, 72.....Capt. Sir G. R. Sartorius
Magpie,.....Com. Brock
Minden.....Capt. M. Quin

Nautilus, 10.....Com. Bingham
Nimrod, 20 .....Com. Glasse

Pantaloon 10 ....Com. Lapidge
Pearl, 20 .....Capt. Stopford
Prometheus .....Lieut. Com. Pasco

Queen, 100 .....Capt Sir C. Sullivan, Bart.

Rattlesnake.....Master Com. R. Browne
Raven, 3 .....Lieut. Com. Stephen

Savage, 10 .....Lieut. Com. Bowker
Siren, 16 .....Com. Smith
Skylark, 6 .....Lieut. Com, Morris
Starling .....Lieut. Com. Hunt

Thunder, 6 .....Com. Edward Barnett

Vesuvius .....Com. J. J. Ommanney
Vernon, 50 .....Capt. Walpole
Victoria & Albert Capt. Lord Fitzclarence, G.C.B
Vindictive, 50....Capt. Toup Nicholas, C.B.
Volcano .....Lieut. Com. Miller

Wanderer, 16....Capt. Seymour

Nautical Notice.—*Newarp Light Vessel.*—This Corporation having caused a new light vessel to be equipped and moored at the station at the north end of the Newarp Sand; Masters, Pilots, and other persons, are

to observe, that instead of shewing one ball upon the mainmast only, each of her three masts, is now surmounted by a red ball. The appearance of the light in the night-time remains unchanged.

By Order J. HERBERT, Secretary.

Trinity House, Feb. 1, 1845.

PROMOTIONS AND APPOINTMENTS.

(From the Naval and Military Gazette.)

Whitehall, Feb. 10.—The Queen has been pleased to direct letters patent to be passed under the great seal of the United Kingdom, constituting and appointing the Right Hon. Thomas Earl of Haddington, the Right Hon. Sir G. C. Cockburn, G.C.B., Admiral of the Red Squadron of Her Majesty's fleet; Sir William Hall Gage, Knt., Vice-Admiral of the Red Squadron of Her Majesty's fleet; W. Bowles, Esq., C.B., Rear-Admiral of the Blue Squadron of Her Majesty's fleet; the Hon. W. Gordon, Captain in Her Majesty's navy, and the Hon. Henry Fitzroy, to be Her Majesty's Commissioners for executing the office of High Admiral of the United Kingdom of Great Britain and Ireland, and the dominions, islands, and territories thereunto belonging.

PROMOTIONS.

CAPTAIN on the Retired List of 1840, G. Truscott.

COMMANDER—J. Orlebar.

RETIRED COMMANDERS of 1816—N. Manger, J. Pasley, Robert Sangster—S. Allen from List of 1830.

LIEUTENANTS—E. Morgan, W. C. Grierson, H. Smith, P. Arkwright, W. Armytage, E. D. Hay, H. N. Burroughs, H. Bainbridge.

DEPUTY INSPECTOR of Hospitals—J. Allen, M.D.

SURGEON—W. Brown.

PAYMASTER and PURSER—J. De Vries

APPOINTMENTS.

Captain the Hon. R. S. Dundas, C.B. (1824), to be Private Secretary to the First Lord of the Admiralty, in the room of Capt. W. A. B. Hamilton, appointed Second Secretary to the Admiralty, v. Sir John Barrow, retired.

CAPTAINS—H. Kellett, C.B (1842) to *Herald*—E. Collier, C.B. (1814) to *Rodney*—W. Willes (1814) to *Vanguard*—J. M'Dougall (1836) to *Vulture*—Sir W. O. Pell (1813) to Greenwich Hospital—G. T. Falcon (1813) to be Superintendent of Pembroke Dockyard.

COMMANDERS—J. C. Prevost (1844) to *Rodney*—R. Barton (1838) to *Vanguard*—W. W. Hornby (1841) to *Styx*.

LIEUTENANTS—W. Tottenham (1841), H. Stanfell (1840), R. C. Tattenall (1844), M. Bourchier (1841), W. Howatt (1826) and the Hon. O. W. Lambert to *Vanguard*—T. E. L. Moore (1843) to *Excellent*—F. G. Leigh (1842) to *Stromboli*—W. H. Webb (1841) to *Firebrand*—T. J. Levinge (1839) to command *Dolphin*—J. Wood (1841) to *Pandora*—D. Elliott to *Penelope*.

MASTERS—G. J. Hodges to *Comus*—J. L. Hill to *Herald*—J. M'Donald to *Rodney*—P. C. D. Bean to *Imaum*—S. Flin to *Vanguard*—R. S. Rundle to *Styx*.

MATES—T. A. Homer to *Cyclops*—G. Hickley to *Vindictive*—G. Bellis to *Eagle*—F. J. Hornby to *Excellent*.

SECOND MASTERS—J. W. M'Intosh and J. W. Hall to *Vanguard*—J. Ottley to *Herald*—W. Wilson to *Gipsy*—J. North to *Gossamer*—T. Fogden and J. Anderson to *Cerberus*—J. Imrie to *Rhadamanthus*.

MIDSHIPMEN—S. Skipworth and W. J. Ford to *Excellent*—J. H. Kerrick to *Rodney*—C. Denham, G. F. Wellesley, P. Johnson, and J. J. Dawkins to *Vindictive*.

NAVAL CADETS—T. B. Herbert to *St. Vincent*—H. Ratten to *Lily*—W. Temple to *Albion*.

SURGEONS—A. M'Kechnie, M.D., to Haslar—J. M'Ternan to Deptford Dockyard—W. Bruce to Greenwich Hospital—D. Finlay to *Rodney*.

ASSISTANT SURGEONS—W. Widley to Plymouth Hospital—T. Secombe and C. E. Protherne to *San Josef*—G. M'Cullagh and E. Elliot to *Vanguard*.

NAVAL INSTRUCTOR—G. F. Parker to *Rodney*.

PAYMASTERS and PURSERS—T. Shanks to *Vanguard*—J. Maddocks to *Rodney*.

CLERKS—B. W. Tribe to *Pandora*—W. Pearce to *Dwarf*—W. D. Goodwin to *Rhadamanthus*.

SECRETARY—W. Jeans to Vice Admi. Sir F. Austen, K.C.B.

Births.

At the Marine Barracks, Stonehouse, the lady of T. Miller, Esq., Surgeon of the Plymouth Division of Royal Marines, of a son.

Feb. 11, at Bowden's Hill, Herts, the lady of W. H. Molyneux, Esq., Com. R.N., of a daughter.

Marriages.

Lately, at Plymouth, Mr. W. D. Bateman, Paymaster and Purser, R.N., to Charlotte Augusta, second daughter of the late Capt. W. Sanders, R.N.

Feb. 1, at Cheltenham, Capt. R. B. Watson, C.B., eldest son of the late Capt. J. R. Watson, R.N. to Helen, daughter of the late John Bettington, Esq.

Feb 4, at Canterbury, Lieut. A. Burton, R.N., to Helen Maria, daughter of O. Oriebar, Esq., and granddaughter of the late Admiral Aplin.

Deaths.

Feb. 5, at Southsea, near Portsmouth, the Rev. W. Tate, A.M., Chaplain to the Convict Establishment at that port, late Preceptor at the Royal Naval College, and formerly Fellow of Trinity College.

Feb. 5, at Fens, near Devonport, Com. R. Clark, aged 82.

Feb. 9, at Southall, Capt. A. V. Drury, R.N.

METEOROLOGICAL REGISTER.

Kept at Comm's Hill, Greenwich, by Mr. W. Rogerson, of the Royal Observatory.

From the 21st January, to the 20th February 1845.

Month 1845	Week 1845	Barometer. 9 A.M.	Barometer. 3 P.M.	Fahrenheit Thermometer, In the Shade. Noon	Noon	Min	Max	Wind. Quarter. A.M.	Wind. Quarter. P.M.	Strength A.M.	Strength P.M.	Weather. A.M.	Weather. P.M.
		In Dec.	In Dec.	°	°	°	°						
										1	1		
										2	2		
										2	4		
										4	5		
										1	4		
										6	6		
										5	6		
										2	2		
										1	1		
										1	3		
										6	5		
										4	4		
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										3	3		
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										6	6		
										3	4		
										2	3		
										2	4		
										1	2		
										3	3		
										2	2		
										2	4		
										2	2		

January 31st.—Mean height of the Barometer—29·795 inches; Mean temperature —34·5 degrees. Depth of rain fallen 2·483 inches.

Our Publishing Friends must again excuse our passing by their labours until our next number. We perceive that the 2nd Edition of the Nautical Almanac has just been published.

Mistakes in the Table of "Arctic Expeditions from England" p. 120 :—

Page 120, No. 10, Hagerwell, col. 3, for "1589", read "1606".

Page 120, No. 26, Richard's Gilliam, col. 3, for "1667" read "1668."

Page 120, No. 28, Prosperous, col. 7, for "4576", read "1576."

The Entrance to the River Tamar, *Van Diemen Land.*

The only danger near the entrance of the Tamar river, is the Hebe reef, named after a ship lost on it in 1808. It occupies a space of a quarter of a mile, chiefly in an east direction; a small portion of its centre is nearly dry at low water; this part bears S. 89° W., 2 miles and 3-10ths from the light-house on Low Head; there is a channel of 7 fathoms inside it. The guide for passing northward of it is a white spot on the N.W. extreme of Louis Head, in one with the light-house; the latter will then bear E. 16° S.

The most formidable shoal in the mouth of the Tamar bears the name of Middle Ground, a rocky patch, with (report says,) in one spot only 9 feet at low water spring tides; but the least water found on it by the Beagle's boats, was 12 feet. The north extreme of Low Head in one, with the first black cliffy projection to the east of it, or the flag-staff on Low Head, open northward of the light-house, clears the northern edge of it.

The leading marks for entering eastward of the Middle Ground, (generally called the Eastern Channel), are the Shear and West Beacons. The Shear Beacon must be kept a little open to the left, or eastward of the West Beacon* until getting abreast of the light-house, when both beacons should be kept in one. When within 2½ cables of the Shear Beacon, the course should be changed in the direction of the Red Beacon on the Barrack Rock, to avoid a patch of kelp, extending 1½ cable in an easterly direction from the Shear Beacon; the depth there is 9 feet, and the least in the East Channel will be 4 fathoms at low water, crossing a ledge apparently extending from Low Head to the Middle Ground.

The Western Channel is two cables wide, with a depth in the shoalest part of 10 fathoms. It is formed by the Middle Ground on the eastern side, and the Yellow Rock Reef on the western: the latter is an extensive patch of kelp, with a light-coloured double rock near its extremity; the least water on it at low water is 6 feet; from the Shear Beacon it bears N. 50° W. 5-10ths of a mile, and S. 52° W. 8-10ths of a mile from the light-house; there is generally a white buoy in its vicinity, and a black one on the western edge of the Middle Ground. The Barrel Rock Beacon, and the high and low beacons, erected by the Beagle's crew on shore over Lagoon Bay, kept in one, leads through the Western Channel. When abreast of the Shear Beacon, steer for the next beyond on the west side of the Channel, to avoid a long patch of kelp, with 3 and 5 fathoms in it, extending 2½ cables in the opposite direction of the light-house from the Barrel Rock.

The high part of the Western Reef bearing S.b.E. leads into the fair way of the Western Channel, when the beacons over Lagoon Bay will be seen: the latter is the second sandy beach inside the light-house on the eastern shore. The Western Reefs are those fronting the Western Entrance Point. The part above-mentioned is a black patch of rocks, near their northern extreme, and is the only part uncovered at high water.

* The west beacon stands in front of Dr. Brown's house, which is first inside Point Friend—the western entrance point.

The shoals on either side within the entrance of the river, are marked with beacons. Those on the western shore have a letter, V, on their tops; and those on the eastern, a cross.

Shoals marked with chequered buoys, may be passed on either side; a red or black buoy signifies the danger extends from the eastern shore, and a white, that it is from the western.

The result of 115 tidal observations taken 3 miles within the entrance, gave 12h. 06m. for the time of high water on the full and change day. The rise of tide was irregular, the least being 4 and the greatest 10 feet. The greatest rise noticed in the Beagle was during the neaps, caused by a strong N.W. gale, forcing the water into the river. The tides flow 5h. 50m. and ebb at 6h. 25m. with a velocity varying from 2 to 5 miles an hour, according to the confined or open space of river the stream traverses.

According to the observations made in the Beagle, the position of the light-house on Low Head is as follows: Lat. 41° 03′ 26″ S., long. 4° 25′ 44″ W. of Sydney, or 146° 50′ 16″ east of Greenwich. Variation 10° 05′ easterly.

The light is elevated 140 feet above the sea level, and may be seen in clear weather 16 miles from the decks of small vessels, revolving once in fifty seconds.

J. L. Stokes,
Late Commanding H.M. Surveying Sloop, Beagle.

The West-India Earthquake of February 1843.

It is now more than a year since one of the most terrific of modern earthquakes shook the Carribbean islands, and to my surprise no account of it has appeared in any of the Magazines. The description of it in the newspapers of the day were short, and imperfect in many respects.

As I happened to be at Antigua at the time, and witnessed this convulsion of nature in all its awful sublimity, it may, perhaps, be interesting to some, although the nine days' wonder has past, to read some further account of it. As from my position, being on board ship at the time, I did not lose my self-possession, but saw every thing that occurred within view clearly and distinctly, the impression left on my mind is, perhaps, stronger and more vivid than it would otherwise have been. Unfortunately not being of a scientific turn, many things may have escaped me that might have afforded some information on one of these mysterious convulsions of nature. There is one fact of which I feel perfectly confident, and which proposition I think may be fully proved.—

That the shock of an earthquake radiates from a centre, consequently the nearer the centre, the more violent the action. I have ascertained that the direction of the vibration was from S.E. to N.W. at Antigua, from N. to S. at Dominica, and from nearly S.E. to N.W. at St. Kitt's. The Thames steamer was standing nearly due south when the shock struck her; she stopped as if she had run upon a rock.

The shock was felt towards the north and the north-west, tak-

ing Guadaloupe for the centre; first, at Antigua, St. Kitt's, Montserrat, and Nevis, in tremendous force; at Saba St. Eustatia less violently; at Tortola and St. Thomas, the most northern islands slightly in comparison. Of the other islands north of Antigua I know nothing. To the south and east St. Deseada, Maria Galante, and Dominica the shock was very severe, although not so much mischief was done as at Antigua. At Martinique it was also very violent; less so at St. Lucia, and St. Vincent; and at Barbados it did very little mischief. I am not aware if it was felt at all at Grenada. A ship about 40 miles E.N.E. of Barbados felt it. I should like to know how she was standing at the time.

From this it would appear that the centre was at or near Guadaloupe. On arriving at England in the Acteon, the disastrous news from that island had not been received, but from what I could see and gather previous to leaving Antigua, I felt quite certain that such was the case, and the event proved me to be right.

The radius of the shock I take to have been about 3 or 3½ degrees.

The rate of travelling is scarcely even to be guessed at; particularly as I conceive people were too agitated and confused to notice the exact time and duration of the shock. If the correct time could be ascertained at Guadaloupe, and at St. Vincent, St. Thomas, and Barbados, which are nearly equi-distant from that island, this theory might then be established, as well as the rate of travelling.

I could distinctly see at first the travelling of each vibration, or wave, on the smooth surface of the dock-yard. Were I to venture a surmise, I should say, that the number of these distinct undulations was almost thirty; and that the rate averaged about 100 miles in a minute; and the duration from 80 to 90 seconds.

The displacement of the earth, whether caused by steam, by water, by wind, by gasses, or electricity, is upwards, and from a centre in veins, giving towards directions or points, not a whirling or confused motion, like that of the hurricane. This would not appear to be so by the fall of houses; the walls in most cases falling inwards. This, however, is caused by the waving motion of the earth, which acts upon the foundations, or lower parts of the walls first, which being loosened and displaced, the weight of the roof is sufficient to bring the walls inwards with it. (The plain walls all fell towards the north.) This was, with few exceptions, the case at Antigua. Build a house of cards, shake the table, and they will in most cases fall together in a heap. You could not have a better illustration.

One very remarkable circumstance attending this particular earthquake is, that there were no premonitory symptoms; no black lowering clouds, hanging like a pall over the earth and sea; no rumbling noises in the bosom of the earth; it came like a thief in the night, suddenly, and without warning. By God's providence it happened at an hour when men were at their daily work; had it come in the night-time, how horrible!

The shock came on gradually; nearly 30 seconds elasped before it was at its greatest strength, consequently people, with a few exceptions, had time to rush into the open air. The earth did not gape and open wide enough to swallow whole streets, as at Point au Pitre, nor did the

sea rise. This will account for the small loss of life at Antigua, although the destruction of property must have been immense, for out of about of 100 sugar mills, 94 or 95 were utterly destroyed, or so much damaged as to be useless.

[The following slight description is from my Journal, since written from memory, as I unfortunately lost my passage, and for some time, baggage, notes, and every thing, except the clothes I had on.]

H.M.S. Dee, English Harbour, Antigua, Feb. 18, 1843.

At 23 minutes past 11, (I am particular as to time, as I looked at the Captain's watch, in the cabin, just as I came up from below), I was called on deck to see the Thames just arrived off with the English mails.

There was nothing very unusual or remarkable in the atmosphere. The sun was shining hot and bright, a few light fleecy clouds passing at intervals, like shadows; the wind was steady and regular, blowing rather fresh and cool from the usual quarter, N.E. The only thing that could be noticed, and that because rather uncommon at the time of the year was, a deep purple haze hanging over the different islands, and shutting in the horizon. In high spirits, at escaping from the pestilential air of these beautiful groves, I stood smoking my cigar, watching the motley crowd of men, women, and children of the Royal Artillery, who were cooking, washing, and running about and enjoying themselves on the smooth surface of the dockyard; almost fancying myself at a fair in merry England, when all on a sudden, as if by magic, the scene was changed, and I felt once more that I was in the Tropics. Suddenly I saw the cliff behind the coal-yard vibrate to and fro, the sail loft bent, and played backwards and forwards, on the huge posts that supported it. The smooth surface of the dockyard undulated like a carpet under which the wind has crept, forming in a second rents and chasms in the soil. The huge vessel on which I stood, reeled to and fro, quivering and shaking with such rapidity and force, that I could scarcely keep my legs. The sound that accompanied it was absolutely terrible and startling. On it travelled, striking down cliffs, houses, rocks, batteries; all seemed to crumble before it. The water in the harbour bubbled, and foamed, and hissed, and in a moment became dissolved, and a white substance arose. Turning my eyes for a second up the harbour, I saw a high cliff, called Monks Hill, with an old fort at the top, come toppling down, enveloped in a moment in a cloud of dust.

How can I paint the horror and confusion that instantaneously seized upon those that were on the wharf? Some rushed for the ship, scrambling up its lofty sides; mothers shrieking for their children, children screaming for their mothers; many in their distraction threw themselves into the water, even some of the sailors jumped overboard; how they escaped God only knows,—but no serious accident occurred. When the shock was over, to my dying day I shall never forget the horror that was depicted on the countenances of all. Men gazed on each other in blank and terrible dismay. One thought I remember startled me, as Lisbon flashed across my mind, should the sea suddenly

rise. The idea was fearful for a moment, but that was soon lost in the fear that the men would get jammed between the piles of the wharf and the ship, as she was rolling fast and with great violence. I do not know to what to compare the infernal sound. A heavy laden wagon-train rattling through a hollow way, magnified ten thousand times, might convey some idea of the din, when the shock was strongest. The vessel appeared to be grinding on a coral rock; there was too, a sense of giddiness and sickness, as the ship quivered and reeled under your feet, perfectly appalling. Still the sky was serene and bright, and the sun shone in all its cloudless beauty. But what was the island? A heap of desolation. In one minute and a half its ruin was completed. I can conceive nothing that conveys such an idea of the awful sublimity of angry nature as the works of man's hand, perhaps of centuries, overthrown in an instant. Of all the elements, fire, water, air, none are so rapid or terrible in devastation as the earthquake, from whatever source it arises.

On landing immediately after the shock had ceased, at a small quay, called Oddlam's Wharf, I found it heaved up in the centre and the edges, nearly level with the water. One of the huge blocks of stone of which it was built, was split diagonally in two, as clean as if cut with some sharp instrument, and in the direction of the shock: nothing that I saw before or after, gave me a stronger idea of the power of the shock than this. Two horses were standing under some mancheneel trees; they were trembling and shaking like aspen leaves.

On arriving at the Barracks, on the ridge I found every thing in confusion, the hurricane-proof barracks a mass of wreck. In the officers' quarters, at Shirley Heights, the partition walls had fallen in and buried everything beneath the rubbish; guns strewed round, piles of shot thrown down, batteries sunk and split. The scene from the heights was extraordinary; Nevis, Montserrat, and Redonda presented a strange and awful spectacle, enveloped in clouds of dust. You could scarcely tell what remained of them; they seemed crumbling into nothing. Guadaloupe appeared to be on fire; huge volumes of smoke mounting upwards, and rolling over the sea. Every one thought a volcano had burst out; it was the miserable town of Point au Pitre in flames. The sea was strangely agitated, and for miles from the land discoloured: the sea-face seemed changed. Bright places on the dark cliffs showed where huge masses had been torn from their beds and fallen into the waves. All around where you stood a heap of ruins. Pieces of rock, of several tons weight, had become detached from the ridges, and, bounding down the slopes, ploughing their way through the cane-fields, lodged in the valleys and on the roads. One of these I passed on the road to St. John's.

I do not mean to enter into a detail of the mischief that was done; that would occupy too much space and time. One thing, however, may be here remarked; that when hurricane-proof houses were destroyed, bomb-proof magazines, split and rent from bottom to top, massive rocks and stones, as I may say, rent in twain; the slight wood-built houses stood, they bowed before it, and were saved.

I visited St. John's the next day; it was the picture of desolation. The cathedral, churches, prisons, barracks, private houses, stores, all had

suffered equally. Well may this be called an unfortunate town. Within a short period of years it has been visited by a hurricane, by fire, and by earthquake. May it rise again, like a phœnix, from its ashes ; for it is one of the few of the West Indian islands that, by industry keeps itself from the utter ruin that has visited the rest.

I slept amid the ruins that night, and about two o'clock was awakened by another shock, which, however, was slight. There was another next day, when some rain fell ; but I believe there were slight shocks at intervals, for some days after. A few anecdotes, and I have done.

An officer had, just as the shock began, driven on to the dock-yard wharf ; he had scarcely got out when the gig was overturned by the motion of the earth, but the horse escaped. In the confusion that naturally arose among the soldiers on the ridge, a prisoner in solitary confinement in the cells, could not get out ; how truly awful must those moments have been ; fortunately his prison stood, and after a time he was released.

Just as the prison at St. John's fell the prisoners were all let out, and all escaped ; but they were so terrified, that all gave themselves up the next day.

The shoals of fish that frequent English harbour were observed in the morning to be agitated, in an extraordinary manner, rushing about, as if pursued.

The master and passengers of the Thames fancied at first that they had struck on a rock ; what a reception for one who had never been in the Tropics before. The appearance of the island from the sea must have been truly magnificent and strange.

An immense deal of wine was destroyed ; for much even of what escaped being broken, turned muddy and sour, particularly the light kinds of wine, as Sauterne, Moselle, &c.

This is all that I can remember ; like an awful dream, the impression it has left is vague. A few moments of sublime terror, and years of shuddering, though indistinct recollections.

The Storm of the year 1703.—Coast of England.

Sir,—In a professional work, like the "*Nautical Magazine*," expressly dedicated to the use of seamen, the registering of the circular storms which pass over England, becomes an important point to be attended to, because it is principally from a knowledge of their operations upon our coast, that the mariner can hope, on future occasions, to be prepared to act with judgment for the security of his vessel, with the best prospects of success. I shall, therefore, Sir, make no apology for handing the following statement to you, for your consideration ; and believing, although the subject embraces a melancholy recital, it will not be found devoid of interest to the nautical reader.

Among the various severe tempests which have been experienced in England, not one appears to have been more furious, or in so short a

time, more disastrous in its effects than that of the November 26, 1703. The circumstances attending it were recorded at some length; but as I have not been able to obtain the work in which these are narrated, I must be content with the gleanings picked up elsewhere.

This hurricane appears to have been traced back into the Atlantic, about 1500 miles; but there is little donbt of its having pursued the usual course of such meteors, from the American continent, and of its having originated in the West Indies.

It was stated at the time of its occurrence that, the homeward-bound ships were hurried up the English Channel with amazing rapidity, and that the storm, in its career, swept the ocean, and filled every port; and that no ship that did not go direct before the wind could be saved from foundering.

This is the opinion entertained at the period—140 years ago; but experience has since proved that ships may lie to with as great a prospect of security as when scudding; indeed, on some occasions, with more security. In those days ships generally laid to under the main-sail, a practice, whether right or wrong, that has long been discontinued.

The storm passed over England, France, Germany, Sweden, Finland, Russia, and part of Tartary;—"and" (may be supposed to have) "spent itself amidst the islands of ice in the Frozen Ocean." Its progressive course, therefore, appears to have been to the north-eastward, and in the Channel, the wind from a western direction.

In Pennant's journey to the Isle of Wight, he says, "I refer to a most ample relation to its dire effects, by sea and land, given in the "City Remembrancer,"* Vol. II., from page 43 to 187. Its height was in the night of November the 26th, but it lasted with increased fury *fourteen days*. That dreadful night was uncommonly dark, and made more hideous in many places by the quick corruscations of lightning, and the singular glare of meteors, and imaginary symptoms of earthquakes, while the rolling thunder, and the howling of the winds formed the terrific *diapason!*" He states from reports, that in various parts, no fewer than 8000 persons perished! He also mentions the loss of the squadron under Admiral Beaumont, on the Goodwin Sands, "and near 1200 gallant sailors, in the midst of a most important war." This was a sad calamity indeed; but it is to be hoped, that on any other future occasion, on the prognostications of the approach of a storm of this nature, in the autumn or winter months, the ships at anchor in the Downs, will speedily slip and run for Sheerness; or, as a last resouree endeavour to get into the North Sea, above the parallel of the Elbe, in such a posisition as to allow room for drifting. This it must be acknowledged would be a desperate alternative, but unquestionably less so than remaining at anchor in the Downs. Of course, if the wind should be from the eastward it could not be accomplished. Unfortunately there is no haven, or harbour of refuge between Portsmouth and the Thames; but, considering the imperative necessity there is for a sheltered anchor-

* Any gentleman who may be in possession of this work, or who can refer to it at any of the public institutions, and would give extracts from it respecting the operation and the effects of the storm, would render a service to science.

age on a large scale, it is to be earnestly hoped that the recent surveys and reports will not be lost upon the Authorities. A million or two of pounds expended for such an object, would be an incalculable benefit to the maritime commerce of this great trading nation; and we are convinced that no outlay could be made, which would add more to the general prosperity of the community than this, great as the sum, comparatively, appears.

We return to the consideration of the storm, as one of great interest to the seaman, because its action was at the very threshhold of his home, and which will naturally give rise to the very serious reflection that—as in the case under review, he may, after having braved the perils of a long voyage, have the prospect suddenly opened before him of almost certain destruction upon his own iron-bound shore, where no friendly port of shelter exists to afford security to his fugitive vessel!

If we were to suppose the circle of operations to have been actually fourteen days in its transit over England, and allow that the meteor moved but seven miles an hour, the diameter would be 2352 miles, and the circumference about 7392 miles! an extent that may appear almost incredible, but which may, nevertheless, not be far from the truth. For it is within the bounds of probability to conceive, that, in the higher latitudes, such meteors may spread across the Atlantic from Europe to America.

Captain Kotzebue, in one of his voyages mentions the curious coincidence of hurricanes occurring on the same day on the coast of California, at Manila, and at St. Petersburgh in Russia; these points are too remote to lead to the inference, that the storms were connected by one wide circle; for in that case nearly one half of the globe would have been involved in tempest. But the extent to which these meteors may spread, yet remains an interesting point to be determined.

In his Naval History, Campbell mentions this storm of 1703. He says: "We are now to speak of the greatest disaster that has happened within the memory of man, at least, by the fury of the winds; I mean the storm which begun on the 26th of November, 1703,* about eleven in the evening, the wind being W.S.W., and continued till about seven the next morning. The water flowed to a great height in Westminster Hall, and London Bridge was in a manner stopt up with wrecks. The mischief done in London was computed at no less than a million, and the city of Bristol suffered damage to no less than one hundred and fifty thousand pounds! But the greatest loss fell upon our navy, of which there perished no less than thirteen ships, and upwards of fifteen hundred seamen were drowned."

The men-of-war lost were:—The Reserve, Vanguard, Northumberland, Stirling Castle, Mary, York, Mortar Bomb, Eagle, Resolution, Litchfield, Newcastle, Vesuvius, F.S., and Restoration.

Her Majesty the Queen, by the advice of her Privy Council, directed "that the widows and families of such commission and other officers and seamen as have perished by reason of the late storm, in her Majesty's service at sea, be entitled to her Majesty's bounty in the same manner, as if they had been actually killed in fight," &c.

* Queen Anne's reign.

It would appear by this account that the greatest height of the storm lasted but eight hours; but allowing the entire circle to have occupied double that time in its transit, which was probably the case, its diameter would be reduced to about 112 miles; and, as the southern verge only passed over the Channel, the body of the great whirling stratum being to the northward, the changes of wind would not amount to more than two or three points.

S. J.

HYDROGRAPHICAL NOTICES.—*Currents.—By Col. E. Sabine, R.A.*

PREVIOUSLY to my leaving England in 1821, I had had the great advantage of much conversation with Major Rennell, on the subject of the currents in the Northern and Southern Atlantic Oceans, and of having my attention directed by him to those points in particular, concerning their velocity, limits, and temperature, on which further inquiries might conduce to the advancement of hydrographical knowledge.

The method of ascertaining the existence, direction, and velocity of a current, where land is not in sight, and a ship cannot be rendered stationary by anchorage, is to compare her position at intervals of sufficient length, (generally of 24 hours,) by observation and by reckoning. By the former is learnt her real change of geographical position in the interval; by the latter, the course and distance that she has gone through the water; should the position by the reckoning not agree with the position by the observation, the difference (presuming both to be correct) is the indication and measure of current.

To determine a ship's position from day to day by observation, or rather her relative position on one day to the preceding, has become, since the introduction of chronometers, a matter of very simple accomplishment, and capable of much precision. It is far otherwise with the reckoning, however, when more is sought by it than such a rough approximation as may serve the ordinary purposes of navigation; it must in fact, require the most assiduous and unremitting attention, as well as considerable nautical experience and judgment, to estimate correctly the continually varying effects of the winds and sea, on a body that is also continually varying the measure of her exposure to their influence. It may be in the power of an individual in a vessel, to obtain, by his own exertions alone, that portion of the materials towards the evidence of currents, which depends on her real change of position; but the completion of the evidence by a sufficiently correct reckoning must be the result of an interest participated in by all the executive officers of a ship; or by the establishment of such habits of accuracy, under the authority of her commander, as are not of usual practice, because they are not necessary for the general purposes of navigation; the employment of chronometers, by which the position of a ship is ascertained, and a fresh departure taken on every day that the sun shines, has superseded the necessity of that vigilant and scrupulous regard, which the older navigators paid to all the details of the reckoning, on which alone they had to depend; and

has tended to substitute general habits of loose and vague estimation, for the considerate and well-practised judgment with which allowances were formerly made for the incidental circumstances of steerage, leeway, making and shortening sail, &c., &c., on a due attention to which the accuracy of a reckoning so materially depends.

In ships of war especially, the reckoning is further embarrassed by a difficulty, less obvious, but not less generally operative, by which, if not properly provided against, the knowledge of the true course which the ship has made is necessarily rendered very uncertain. It arises from the usual practice of directing the course by the binnacle compasses, which are two in number for the convenience of the helmsman, and being placed one on the larboard and the other on the starboard side of the midship, with a space between them of greater or less extent according to the size of the vessel, can scarcely fail, and are in fact generally influenced differently by the ship's iron; and being subject to different *systems* of attraction, the compasses not only disagree, but their disagreement varies according to the direction of the ship's head, the amount of the dip of the needle, and the force of terrestrial magnetism. It is customary always to steer by the weather compass, and thus each is liable to become in its turn the directing compass for periods of more or less duration, and the corrections of the courses for the disturbing influence of the ship's iron become so various and complicated, as to render the deduction of a correct reckoning practically unattainable. For example, the binnacle compasses of the Iphigenia, on her passage from England to Madeira, were observed to differ from each other half a point in one direction when on southwesterly courses, and less than half a point in the opposite direction when on easterly courses, the indications of the compasses having crossed each other, and agreed at some intermediate point; it was requisite, therefore, that the correction to be allowed on every course by each of the two compasses should be ascertained, and that the compass by which each course was directed should be specially recorded, in order that the true course should be known.

The most obvious mode of preventing so much inconvenience and trouble, as well as the more correct practice, is to direct and note the ship's course by one compass only, stationed permanently in some convenient situation without reference to the helmsman, and to use the binnacle compasses solely to steer by, on the point which may be noticed at the time to agree with the magnetic course of the standard compass; and by employing an azimuth compass for the latter purpose, the advantage is gained of enabling the variation to be observed directly with the compass by which the course is governed, and thus of avoiding intermediate comparisons, in which time is occupied, and errors frequently introduced. This arrangement of a standard compass was adopted by Capt. Clavering in the Pheasant, and subsequently in the Griper, and was found to answer its purpose perfectly, and to be attended with no practical inconvenience whatsoever.

Although from the causes above noticed no satisfactory investigation of the direction or velocity of currents could be made in the Iphigenia, in her passage from England to the coast of Africa, a remarkable and very interesting evidence was obtained, by observations on the temperature of the sea, of the accidental presence in that year of the water of

the gulf stream, in longitudes much to the eastward of its ordinary extension. The Iphigenia sailed from Plymouth on the 4th of January, after an almost continuous succession of very heavy westerly and south-westerly gales, by which she had been repeatedly driven back and detained in the ports of the channel; the following memorandum exhibits her position at noon on each day of her subsequent voyage from Plymouth to Madeira, and from thence to the Cape Verd Islands, the temperature of the air in the shade and to windward, and that of the surface of the sea; it also exhibits in comparison, the ordinary temperature of the ocean at that season, in the respective parallels, which Major Rennell has been so kind as to permit me to insert on his authority, as an approximation founded on his extensive inquiries; the last column shews the excess or defect in the temperature observed in the Iphigenia's passage.

	DATE.	Lat. N.	Long. W.	Air.	SURFACE WATER.		Excess or Defect.
					Observed.	Usual.	
	1822.			°	°	°	
Plymouth to Madeira.	Jan. 5	47 30	7 30	47	49	50	— 1
	" 6	44 20	9 30	52·5	55·7	52·5	+ 3·2
	" 7	41 22	11 37	54	58 2	54	+ 4·2
	" 8	38 54	13 20	54·2	61·7	55·7	+ 6
	" 9	No Observation.		56	63	58	+ 5
	" 10	33 40	15 30	60·7	64	60	+ 4
Madeira to the Cape Verds.	" 19	26 00	17 50	66	65·5	67	— 1·5
	" 20	24 30	18 50	68	67	68·4	— 1·4
	" 21	23 06	20 00	69	69	69·5	— 0·5
	" 22	21 02	21 27	69·5	69·5	71 2	— 1·7
	" 23	19 20	23 00	70·6	70·2	71·6	— 1·4

It is seen by the preceding memorandum, that in the passage from Plymouth to Madeira, the Iphigenia found the temperature of the sea, between the parallels of 44½° and 33⅔° several degrees warmer than its usual temperature in the same season; namely, 3°.2 in 44½°, increasing to 6° in 39°, and again diminishing to 4° in 33⅔°; whilst at the same period, the general temperature of the ocean in the adjoining parallels, both to the northward, and to the southward, even as far as the Cape Verd Islands in 19⅔°, was colder by a degree and upwards than the usual average. The evidence of many careful observers at different seasons and in different years, whose observations have been collected and compared by Major Rennell, has satisfactorily shewn, that the water of the Gulf stream, distinguished by the high temperature which it brings from its origin in the Gulf of Mexico, is not usually found to extend to the eastward of the Azores. Vessels navigating the ocean between the Azores and the continent of Europe, find at all seasons a temperature progressively increasing as they approach the sun; the absolute amount varies according to the season, the maximum in summer being about 14 degrees warmer than the maximum in winter; but the progression in

respect to latitude is regular, and is nearly the same in winter as in summer, being an increase of 3° of Fahrenheit for every 5° of latitude. It is further observed, that the ordinary condition of the temperature, in the part of the ocean under notice, is little subject to disturbance, and that in any particular parallel and season, the limits of variation in different years are usually very small. After westerly winds of much strength or continuance, the sea in all the parallels is rather colder than the average temperature, on account of the increased velocity communicated to the general set of the waters of the North-eastern Atlantic towards the south. To the heavy westerly gales which had prevailed almost without intermission in the last fortnight in November, and during the whole of December, may therefore be attributed the colder temperatures observed in the latitude of 47½°, and in those between 26° and 19½°.

If doubt could exist in regard to the higher temperatures between 44½° and 33⅔°, being a consequence of the extension in that year of the Gulf stream in the direction of its general course, it might be removed by a circumstance well deserving of notice, namely, that the greatest excess above the natural temperature of the ocean was found in or about the latitude of 39°, being the parallel where the middle of the stream, indicated by the warmest water, would arrive, by continuing to flow to the eastward of the Azores, in the prolongation of the great circle in which it is known to reach the mid Atlantic.

One previous and similar instance is on record, in which the water of the Gulf stream was traced by its temperature quite across the Atlantic to the coasts of Europe; this was by Dr. Franklin, in a passage from the United States to France, in November, 1776*. The latter part of his voyage, *i.e.*, from the meridian of 35° to the Bay of Biscay, was performed with little deviation in the latitude of 45°; in this run, exceeding 1200 miles, in a parallel of which the usual temperature, towards the close of November, is about 55½°, he found 63° in the longitude of 35° W., diminishing to 60° in the Bay of Biscay; and 61° in 10° west longitude, near the same spot where the Iphigenia found 55°.7 on the 6th of January, being about five weeks later in the season. At this spot then, where the Iphigenia crossed Dr. Franklin's track, the temperature in November, 1776, was 5½°, and in January, 1822, 3°.2 above the ordinary temperature of the season.

There can be little hesitation in attributing the unusual extension of the stream in particular years to its greater initial velocity, occasioned by a more than ordinary difference in the levels of the Gulf of Mexico and of the Atlantic. It has been computed by Major Rennell, from the known velocity of the stream at various points of its course, that in the summer months, when its rapidity is greatest, the water requires about eleven weeks to run from the outlet of the Gulf of Mexico to the Azores, being about 3000 geographical miles; and he has further supposed, in the case of the water of which the temperature was examined by Dr. Franklin, that perhaps not less than three months were occupied in addition by its passage to the coasts of Europe, being altogether a course exceeding 4000 geographical miles. On this supposition, the water of the latter end of November, 1776, may have quitted the Gulf of Mexico,

* Franklin's works. 8vo., London, 1806, Vol. II., pages 200, 201.

with a temperature of 83° in June; and that of January, 1822, towards the end of July, with nearly the same temperature. The summer months, particularly July and August, are those of the greatest initial velocity of the stream, because it is the period when the level of the Caribbean sea and Gulf of Mexico is most deranged.

It is not difficult to imagine that the space between the Azores and the coasts of the old continent, being traversed by the stream, slowly as it must be, at a much colder season in the instance observed by the Iphigenia than in that by Dr. Franklin, its temperature may have been cooled thereby to a nearer approximation to the natural temperature of the ocean in the former than in the latter case; and that the difference between the excess of 5°.5 in November, and of 3°.2 in January, may be thus accounted for.

If the explanation of the apparently very unusual facts observed by Dr. Franklin in 1776, and by the Iphigenia in 1822, be correct, how highly curious is the connection thus traced between a more than ordinary strength of the winds within the tropics in the summer, occasioning the derangement of the level of the Mexican and Carribbean seas, and the high temperature of the sea between the British channel and Madeira, in the following winter.

Nor is the probable meteorological influence undeserving of attention, of so considerable an increase in the temperature of the surface water over an extent of ocean exceeding 600 miles in latitude and 1000 in longitude, situated so importantly in relation to the western parts of Europe. It is at least a remarkable coincidence, that in November and December, 1821, and in January, 1822, the state of the weather was so unusual in the southern parts of Great Britain and in France, as to have excited general observation; in the meteorological journals of the period it is characterised as "most extraordinarily hot, damp, stormy, and oppressive;" it is stated "that an unusual quantity of rain fell both in November and December, but particularly in the latter;" that "the gales from the W. and S.W. were almost without intermission," and that in December, the mercury in the barometer was lower than it had been known for 35 years before*.

* The following description of this very remarkable winter is extracted from Mr. Daniell's Essay on the climate of London, *Meteorological Essays*, London, 1823,—pages 297 and 298), and becomes highly curious when viewed in connexion with the unusual temperature of the ocean in the direction from which the principal winds proceeded.

"November 1821, differed from the mean, and from both the preceding years, in a very extraordinary way. The average temperature was 5° above the usual amount; and, although its dryness was in excess," [the relative dryness, in consequence of the increased temperature] "the quantity of rain exceeded the mean quantity by one half. The barometer on the whole was not below the mean. All the low lands were flooded, and the sowing of wheat very much interrupted by the wet.

"In December the quantity of rain was very nearly double its usual amount. The barometer averaged considerably below the mean, and descended lower than had been known for thirty-five years. Its range was from 30.27 inches to 28.12 inches. The temperature was still high for the season, and the weather continued, as in the last month, in an uninterrupted course of wind

On leaving the Cape Verd Islands, the Iphigenia proceeded to make the continent of Africa at Cape Verd. The distance between the Cape and the islands is about 400 miles, both being in the same parallel of latitude. This passage afforded an interesting opportunity of observing, on the approach to land, the influence of its vicinity on the temperature of the sea. The general temperature of the surface in that parallel and at that season may be considered 71°.7, the observations made at sunrise, noon, and sunset, in the first 350 miles of the passage, varying from 71° to 72°.4 : but at sunrise on the 31st of January, being then at the distance of 26 miles west of Cape Verd, with no land as yet in sight, the surface water had lowered to 69°.6. On approaching nearer it progressively diminished, until at one mile from the shore, it had fallen as low as 64 degrees, and continued from 64 to 65 degrees, between Cape Manoel and Goree. Cape Verd is situated nearly at equal distances, exceeding 70 miles, from the mouths of the Senegal and Gambia, the one being to the north and the other to the south. It is probable that the water of both these rivers is always colder at their entrance into the sea, than the ocean temperature of the parallel ; that of the Gambia certainly was so at that season, but it was not so cold as the sea in the vicinity of Cape Verd, as on approaching the entrance of the Gambia, the temperature of the surface rose to 67°.5, and varied in the river itself at different hours from 66° to 67°.5 ; and at the depth of 36 feet, being within six feet of the bottom, a self registering thermometer indicated at high water less than a degree colder than the surface. The coast in the neighbourhood of Cape Verd is every where low and sandy, and is covered with trees to the water's edge. Such indeed is the general character of the shores of western Africa, with the exception of Cape Sierra Leone ; but at no other part of the coast was the diminution of the temperature of the water, on approaching the land, so great, as in the instance which has been mentioned. Between the Gambia and Sierra Leone are a succession of rivers, originating in land of less elevation than the Senegal and Gambia, and much exceeding them in the temperature of the waters which they convey into the ocean ; in the mid-channel of the Rio Grande, at a few miles from its mouth, the surface was never less than 74°, and occasionally as high as 77°.5, and at the depth of thirty or forty feet was less

and rain ; the former often approaching to an hurricane, and the latter inundating all the low grounds. The water-sodden state of the soil, in many parts, prevented wheat sowing, or fallowing the land at the regular season. The mild temperature pushed forward all the early sown wheats to an height and luxuriance scarcely ever before witnessed. The grass, and every green production increased in an equal proportion.

"January, 1822. This most extraordinary season still continued above the mean temperature, but the rain, as if exhausted in the preceding month, fell much below the usual quantity in this. There was not one day on which the frost lasted during the twenty-four hours.

"Serious apprehensions were entertained lest the wheats, drawn up as they had been by warm and moist weather, without the slightest check from frost, should be exhausted by excessive vegetation, and ultimately be more productive in straw than corn.

"The month of February, still five degrees above the mean temperature, nded a winter which has never been paralleled."

It would not be difficult to trace in detail, each of the effects described in the receding extract, to the cause which has been thus placed in connection *ith them.*

than a degree colder than the surface. At the entrance of the river Noonez the surface water was 77°.5, and at that of the Rokelle 80°. To the south of the Rokelle, and from thence to the extremity of the Gulf of Guinea, the coast is swept by a current of considerable rapidity, which renders the cooling effect of the land less apparent; but in the bays of the coast, where the current sweeps from point to point, and leaves still water in the inside, a difference is commonly found amounting to three and four degrees*.

The following summary account of the direction and force of the currents experienced in each day's navigation, commences with the appointment of the Pheasant to convey the clocks and pendulums from Sierra Leone to the subsequent stations. Captain Clavering entered with much interest into the inquiry, and by his judicious arrangements, and personal superintendence, until habits were established, the reckoning of his ship was rendered little inferior, as an element in the deduction of currents, to the observed difference of latitude and the chronometrical difference of longitude. On leaving England, I had obtained from the Admiralty a supply of the logs invented by Mr. Massey, which being towed at a sufficient distance astern to be clear of the back-water occa-

* The passage from the Cape Verd Islands to Cape Verd and the Gambia, afforded a not less interesting opportunity of observing the difference in the hygrometrical state of the atmosphere at sea and in the vicinity of the continent, in the region of the trade winds. We had entered the N. E. trade in the latitude of 24° N., nine degrees to the northward of the Cape Verd Islands, and did not lose it until the afternoon of the day on which we quitted the Gambia, the strength declining on the approach to the continent, but the direction continuing unchanged. On the 28th, 29th, and 30th of January, in navigating the first 350 miles of the passage from the islands to the continent, the air in the shade and to windward varied at different hours of the day from 70.2 to 71.2 and the dew point from 63 to 64.5. At sunrise on the 31st when at twenty-six miles west of Cape Verd, the Dew Point was 61.5, and lowered to 57.5 on nearing the land, the temperature of the air not being sensibly affected. Off the entrance of the Gambia on the 1st of February, and in the river on the 2nd, 3rd, and 4th, the dew point was never higher than 51°, and occasionally as low as 48.5, the air over the water and in the shade being generally during the day from 69° to 70°. When about to quit the Gambia on the morning of the 5th of February, we experienced, although in a very slight degree, the peculiar wind called the Harmattan, of which the season was nearly over; its direction was one or two points to the north of the trade wind, or about N.N.E.; the air during its influence fell to 66.5, and the dew point to 37.5; affording a reasonable inference, that in a genuine Harmattan, and before it reaches the sea, the constituent temperature of the vapour may be at least as low as 32°. In the progress to Cape Roxo, on the afternoon of the same day, we lost the Harmattan, and with it the continuance of the trade wind. The sea breeze which followed, raised the temperature of the air to 70°, and of the dew point to 61.5.

It appears, therefore, that when the north-east wind first comes off the continent of Africa, it contains only 53 parts in 100 of the moisture which would be required for repletion at the existing temperature; that in blowing over the sea its proportion of moisture rapidly augments, until at fifty miles from the land, it has acquired 80 parts in 100; which proportion is not subsequently increased by its passage over 350 additional miles of ocean. In the Harmattan the air contained only 38 parts in 100 of the proportion of moisture required for its repletion.

caused by a ship's progress, together with that by the revolutions of a spiral screw upon or in the water through which it is driven. The self-registering log was used as a check upon the estimated reckoning, and proved the value and efficacy of the attention paid to the latter, by its being a very rare occurrence to find a difference between them, amounting to a mile in twenty-four hours. The comparison between the ship's run by observation and by reckoning was usually made by Capt. Claverings from noonday to noonday, and by myself from afternoon to afternoon; and the results being each entered in rows and compared, served for the detection and correction of errors on either side. The table exhibits the ship's true position at noon on each day: the temperature of the surface water, and the direction and amount of the difference of her position, by observation and by reckoning, from noon to noon. On days when the sun was obscured, the direction of the apparent set is deduced from intervals of 24 hours instead of 24, but the rate is that due to each interval of 24 hours.

Date.	Latitude.	Longitude.	Temperature of the Surface Water.	Apparent Set in each 24 hours.
		From Cape Mesurado to Cape Three Points.		
Apr. 25	5 31 N.	11 [illegible] W.	84	°
" 26	Sun obscured.		83	S. 53 E. 32 miles.
" 27	4 53	3 14	83	S. 84 E. 24 "
" 28	4 28	5 [illegible]	..	N. 79 E. 40 "
" 29	4 24	6 36	84·3	N. 76 E. 51 "
" 30	4 [illegible]	45	84·5	
		From Lagos to St. Thomas.		
May 2	3 22 N.	2 51	83·5	°
" 3	3 30	2 32	84·5	S. 45 E. 9 miles.
" 12	4 46	2 49	84	S. 84 E. 17 "
" 11	3 45	2 57	83·2	S. 24 E. 16 "
" 13	Sun obscured.		83	S. 82 E. 22 "
" 13	0 36	5 22	82·8	S. 81 E. 13 "
" 14	0 16	6 24	82·6	

DATE.	Latitude.	Longitude.	Temperature of the Surface Water.	Apparent Set in each 24 hours.
	From the River Gaboon to Ascension.			
1822.	° ′	° ′	°	°
June 15	0 03 N.	7 45 E.	..	S. 80 W. 29 miles.
" 16	0 44 S.	5 50	..	
" 17	Sun obscured.		73	West 48·5 "
" 18	1 00	2 07	74	S. 86 W. 29 "
" 19	1 45	0 19	72 5	N. 88 W. 37 "
" 20	2 34	1 55 W.	72 8	S. 81 W. 47 "
" 21	3 48	4 54	74·5	S. 81 W. 32 5 "
" 22	5 10	7 50	77·5	N. 63 W. 16 "
" 23	6 21	10 43	77·5	N. 57 W. 18·25 "
" 24	7 27	13 22	78	
	From Ascension to Bahia.			
July 10	7 57 S.	14 24 W.	..	N. 74 W. 11 miles.
" 11	9 16	17 00	..	North 2 "
" 12	10 10	19 45	..	N. 35 W. 6 "
" 13	10 35·5	22 25	..	West 16 "
" 14	11 05	25 53	..	S. 82 W. 14 "
" 15	11 42	29 08	..	S. 71 W. 14 "
" 16	12 27	32 51	..	N. 79 W. 11 "
" 17	13 05	36 31	..	
	From Bahia to Pernambuco.			
Aug. 8	13 30 S.	38 22 W.	..	
" 9	Sun obscured.		77·2	N. 69 W. 13 miles.
" 10	13 48	37 59	77·1	N. 12 W. 2·5 "
" 11	12 36·5	37 02	77·2	N. 31 W. 14 "
" 12	11 03·5	36 20	78	N. 33 E. 13 "
" 13	10 15	35 53·5	78	N. 27 W. 15 "
" 14	9 33	35 13	78	

DATE.	Latitude.	Longitude.	Temperature of the Surface Water.	Apparent Set in each 24 hours.
	From Pernambuco to Maranham.			
1822.	° ′	° ′	°	°
Aug. 15	3 04 S.	34 54 W.	78	North 22 miles.
" 16	2 15	34 36	78·4	N. 44 W. 62 "
" 17	1 22	36 45	78·3	N. 70 W. 41 "
" 18	0 17·5	40 17	77·8	N. 66 W. 13 "
" 19	0 55	43 06	77·8	
	From Maranham to Trinidad.			
Sept. 8	0 21 N.	45 58 W.	79·8	
" 9	2 59	48 07	80·8	N. 49 W. 48 miles.
" 10	5 16	50 39	81·8	N. 54 W. 99 "
" 11	7 01	52 38	81·5	N. 38 W. 68 "
" 12	7 05	53 32	83	N. 41 E. 5 "
" 13	7 24	54 19	83·3	S. 47 W. 18 "
" 14	7 43	55 55	84	S. 87 W. 17 "
" 15	8 13·5	57 22	84	N. 72 W. 28 "
" 16	8 39	59 30	84	N. 33 W. 48 "
" 17	8 00	61 60	84	N. 52 W. 57 "
	From Trinidad to Jamaica.			
Oct. 10	10 35	61 56	.. ..	N. 52 W. 45 miles.
" 11	12 24	63 45	.. 83	N. 53 W. 12 "
" 12	13 18	65 36	.. 83	N. 79 W. 21 "
" 13	13 53	67 59	.. 82·5	S. 88 W. 15 "
" 14	15 02	70 45	.. 82·5	
" 15	Sun obscured.		83	N. .. W. 31 "
" 16	17 50	76 05	.. 85	

DATE.	Latitude.	Longitude.	Temperature of the Surface Water	Apparent Set in once 24 hours.
	FROM HAVANNAH TO NEW YORK.			
1822.	° ′	° ′	°	°
Nov. 27	23 09	82 23	.. ..	S. 85 E. 14 miles.
" 28	23 52	81 42	.. 80·5	N. 31 E. 22·5 "
" 29	25 20	79 47	.. 80·7	N. 4 W. 70 "
" 30	28 38	79 32	8 A.M. 80·8 Noon. 80·5 9 P.M 80·1	N. 17 E. 38 "
Dec. 1	32 02	78 33	8 A.M. 79.2 3 P.M. 80·1 8 P.M. 79·5	
" 2	Sun obscured.		8 A.M. 78·2 Noon. 78·7 3 P.M. 78	N. 47 E. 44·5 "
" 3	35 04	74 54	8 A.M. 77·5 Noon. 77·6 6 P.M. 77·3	
" 4	Sun obscured.		8 A.M. 77·5 Noon. 77·5	N. 55 E. 77 "
" 5	36 38	72 29	.. 62·4	West 16 "
" 6	37 00	73 46	.. 60 6	S. 55 W. 10 "
" 7	37 35	74 33	.. 59·5	S. 5 W. 15 "
" 8	38 44	74 26	.. ..	S. 45 W. 6 "
" 9	40 08	74 07	.. ..	

(To be continued.)

[illegible] in the Southern Ocean, and the imperative necessity of a good look-out at Sea.

[illegible]

Mr. Editor.—The liability of ships to fall in with icebergs off the Cape of Good Hope, is a subject of such vast importance, that it cannot be too generally made known: and, under this conviction, I feel it my duty to furnish you with the following extract from the log of the barque Constant, with which I have been favoured by Captain Henery, together with such further information and remarks thereon, as may be useful to the seaman and the navigator.

"On the 13th of September, 1844, when in latitude 38° 10′ south, and longitude 24° 1′ east, saw two large icebergs, and at noon passed four more, bearing north, distant about four miles. We passed upwards of twenty islands of ice during the p.m., and were continually obliged to alter the ship's course to steer clear of them. Six icebergs were in sight astern before dark, having run upwards of sixty miles from the time the first were discovered. Kept a good look-out during the night, and passed close to a large iceberg at 11 p.m.: but no other drifts were discovered till daylight, when two were in sight, and before noon, on the 14th, we had entirely lost sight of these islands of ice. Course and distance from the first discovery of ice until we had cleared the whole, was E.S.E. 240 miles, the wind was fresh at N.N.W., and the thermometer did not fall below 46°."

Captain Henery further remarks, that a great number of sea peterel were about the ship: some of a different description from those he had seen in former voyages: he observed the sea breaking with great force against the icebergs: and several of these large islands were at least 200 feet high, and four or five times that extent in circumference; they formed in a line, and in a N.W. and S.E. direction.

In the *Bombay Times* of the 30th of November, 1844, it is noticed that the ship Rajasthan, which arrived at Bombay on the 16th, when off the Cape, between the lat. of 37° and 38° S. and long. 24° E. passed four magnificent icebergs, which were in sight at the same time, in fine clear weather, and towering from 150 to 200 feet, and in length from 300 to 400 feet. The thermometer when this ship passed to the leeward of these ice islands ranged from 60° to 65°, although a week before it was as low as 48°. The date of this occurrence does not appear, but I suppose it must have been late in September; and, in all probability, the ice seen by the Rajasthan being in same longitude, was a portion of the numerous group observed by the Constant.

I have also received a letter in a Ceylon paper, from Captain Marshall, of the ship Urgent, stating, that on the 12th of September last,

when in lat. 39° 4′ S. and long. 25° 50′ E. during squally and unsettled weather, the Urgent at daylight, on the 13th, was surrounded with numerous icebergs; Captain Marshall, in his report, observes: "*If daylight had not dawned on us, and enabled us to see our danger, nothing short of a miraculous interposition of Providence could have saved us from contact with the ice, and instant destruction.*" Thus, Mr. Editor, it appears that the Constant and the Urgent saw a number of ice islands on the very same day, therefore, taking into consideration the difference of latitude and longtude in their respective position, the ice must have covered a very considerable space, and shews the peril to which outward bound vessels have been exposed during the past season.

The imminent danger to which vessels are liable when falling in with icebergs, and the necessity of extreme vigilance and keeping a good look-out, as the only safeguard against the perilous collision which may be encountered in high latitudes in either hemisphere,* induce me again to call public attention to those cases on record, which shew that ice has, in large and fearful masses, drifted from the southward to the well-known track of navigation, in the Southern Ocean, either to India, to China, or to New South Wales, New Zealand, and Australia.

The first remarkable instance with which I am acquainted, occurred, on the 24th of December, 1789, when H.M.S. *Guardian* struck against an ice island, during a thick foggy night, in lat. 44° 30′ S. and long. 44° E., and her providential escape from foundering was attributed to that dauntless resolution and persevering zeal which her brave and skilful commander Captain Riou displayed, who disdained quitting his ship so long as one ray of hope excited his endeavours to keep her afloat, and he succeeded in conducting the shattered and water-logged hull of the *Guardian* in safety to the Cape of Good Hope, and thereby saved the remnant of his devoted crew, who clung to their ship, and followed the noble example set them by their good and gallant captain. But, on the first shew of danger after the collision had taken place, several of the *Guardian's* officers, and a number of her crew were so alarmed for their personal safety, that, at their earnest entreaty, Captain Riou gave them permission to quit the ship in her boats; they did so, and I believe they were fortunately picked up at sea. The skill and fortitude evinced by Captain Riou on this memorable occasion, first made his name conspicuous in the Navy, and subsequently he fell gloriously on the quarter-deck of H.M.S. *Amazon*, at the battle of Copenhagen, under the eye of his renowned friend and Commander the illustrious Nelson. I can make no other excuse for this apparent digression, than that such a character, who was emphatically described by the Hero of the British Navy, as the "*gallant and good Captain Riou*," cannot be alluded to without especial mention of his imperishable name. But, Mr. Editor, whatever can tend to exalt the fame of Old England's wooden walls, cannot be too often had in remembrance, and needs no apology.

Reverting to the subject of this communication, the next account of ice islands to the southward of which I have any account, states that

* By the last September Mail we have the melancholy intelligence of the loss of the barque James Harris, and eight other vessels, by striking against ice islands in the North Sea, during the Spring of 1844.

J. B.

the French ship Harmonie, and the Spanish barque Constantia, when in company and homeward bound, fell in with icebergs on the 7th of April, 1828, in lat. 35° 50′ S. and long. 18° 5′ E. This may be considered as very remarkable, and is, I think, the most northern limit of ice drifts in the South Seas that is on record: and the brig Eliza, bound to Batavia, fell in with five icebergs, on the 28th of April, 1828, in 37° 31′ S. and long. 18° 17′ E.

In the year 1840, the following vessels saw many icebergs, viz.—

The ship Seringapatam, on the 7th of August, in lat. 30° S. and long. 18° 23′ E., and the barque Ida, on the 8th of September, in lat. 40° 20′ S. and long 26° E.

The many lamentable disasters which have occurred in the open sea, in straits and rivers, and even in harbour, through an overweening confidence in some cases, through neglect in many other instances, so fully and forcibly proclaim that paramount duty which attaches to a cautious and an unremitting look-out on board every ship and vessel, whether under sail or steam, or at anchor, that it would seem a work of supererogation to urge the performance of so essential a line of duty: every practical seaman is aware of it, and yet how many losses, what sacrifice of life and property, and what a number of serious accidents have been occasioned by sheer neglect, are too apparent, from the well-known facts which have been laid before the public. Therefore, in the statement I have now drawn up, it is most gratifying and highly satisfactory to bear witness to the strict attention and watchful care displayed on board the vessels therein mentioned; and, under Providence, their escape from perils of no ordinary kind, may be attributed to a constant and faithful discharge of one of the most important points of naval discipline, viz. obedience to orders, and consequently a sharp look-out.

I remain, &c.,

Madras, January 10, 1845. CHAS. BIDEN,
Master Attendant.

P. S. I avail myself of this opportunity to forward you an important notice* touching the Longitude of the Laccadive Islands.

C. B.

* See Nautical Notices.—ED.

THE MERCHANT SERVICE.

CHAPTER THE FIRST.

Contains a description of the condition of Apprentices generally; their manner of treatment; and the consequent destruction of their future prospects.

I COMMENCE at the forecastle, and shall work aft to the cabin; a career I was compelled to follow as a boy, and one which has produced both in the navy and merchant service, some good practical seamen, some very exemplary men, and some shocking bad ones, arising from want of systematic classification and separation.

Of apprentices there are three sorts: 1st, The boy picked up about the streets, or docks, destined for a foremast-man. 2nd, The reputable tradesman's son, who having a large family, sends a well-educated lad to sea, who ought to be separated from the crew, and carefully instructed with a view to rise as an officer. And 3rd, The man-boy who has learned to shave himself, years before he gives Neptune the privilege of doing it for him, on crossing the line.

Of the first boy, I shall begin by mentioning the too common mode of his introduction on board. The Mate, probably about a week before the ship sails, hints to the Captain, how short-handed they were last voyage, and how useful a couple of boys would be (if the owner would bind them to the employ for three years or so). Well, the Captain gets leave for one, and naturally enough refers himself to the Mate as the proper person to find one; he again applies to the rigger, or lumper, who says, he knows a widow woman in Limehouse Hole, or Shadwell, or Ratcliff-highway, who has a *very fine family of lads*, and it would be quite a charity to take one of them off her hands. The boy is provided with the use of soap and water, and a suit of clothes found by the lumper, on condition that the boy *pays for them in copper nails*, hanks of whipping-twine and marline, and such small geer as are generally scattered about the decks during an overhaul of rigging, &c., previous to sailing; the boy's mother having to hand over the last pawnbroker's ticket (spent in gin) to the said lumper or rigger (as the case may be) until the boy has robbed the ship to the amount due for jacket and trowsers. Then, under these auspices he is escorted to the ship, and some such advice as the following, offered to him on his way down.—"To say 'sir' to the Captain twice, and to the Mate once; to make every thing his own he sees lying about, or wanting an owner. Never to peach on any man whom he sees broaching a rum cask, or robbing the cargo, and in short, to bring nothing away from the ship that he can't carry." With this advice, aided by a knowledge practically acquired, of haunting all dry docks where copper or copper-nails are in use, for the purpose of theft, on pretence of begging chips for his mother's fire, the boy, to all appearance cleanly and good-looking, is in truth, a confirmed Jack Sheppard from habit and inclination, and palmed on the Shipowner and Captain in some such terms as the following:

The aforesaid rigger introduces him by saying, "There's one thing sure, he's as honest as the sun at noon day; but, poor lad, he knows nothing about a ship; but, if the Captain would only allow him, the rigger, to have him, the boy, with him, for the time the ship was in dock, why he could soon learn him to go aloft," &c., &c., or, in other words, he would then have a better chance of cheating the mate, who, if he had the eyes of Argus, could not take in cargo, measure and book it, and look after him too, in a ship where quick dispatch is the order of the day.

The lad is now duly installed, the ship starts for the West Indies, and as he can pull an oar, he is put into the jolly-boat, or gig there, and when the men get drunk in the oddest way in the world, no one suspects little Jack of stowing away pieces of pork and dozens of biscuit, &c. in the fore-sheets, with his jacket stowed over them, *for fear it should rain*; until some unlucky day, in running forward with the bladder of new

rum (alias poison,) stowed in his Scotch cap, his head catches the bight of a rope, off goes the cap, and down goes the rum, nearly on the Mate's toes. The boy is asked how he comes by it, and he mentions some one of the men known to have a dollar or two, who is quite ready to say he gave the lad a couple of shillings to buy it for him. The boy is now well thrashed for bringing off the rum, but not suspected of theft, until the ship's arrival at home. The officers at the dock gates seeing a lad of unusual corpulency, or knowing him as an old offender, stop him, search him, and find on him as much of the owner's property as he can decently carry clandestinely away.

He is now *known* as a thief, and kicked and cuffed accordingly at all times, meriting it or not. And if the old gentleman himself came in the course of the night, and carried off the best bower anchor, boy Jack would get the blame of it in the morning, and be treated accordingly.

This boy serves out his time of apprenticeship, long or short, in a routine of dishonest conduct, visited on his back with a rope's end, which he takes in dogged obstinacy, and leaves his employer, his ship, and officers, with the bitterest curse his heart can devise against them ; and is launched out on the world, what is commonly called a sailor.

The amount of property stolen by boys of this class is quite incalculable, and most richly do those Owners, Captains, &c. deserve to suffer such loss, if they will employ boys or men, whose characters are either never sought after, or acquired in the most desultory manner possible.

The next boy to be introduced to notice, is the son of a gentleman, or tradesman, who has no interest to get him into the Navy, and, agreeably to some foolish wish of the boy's to go to sea, acquired principally by reading "Robinson Crusoe," he is promised, if he be good, that he shall go. His father, if a decayed gentleman, applies through the medium of some of his wealthy and *former* friends, and his son is shipped off his hands and purse ; and the tradesman in like manner applies to the merchant ship-owner, from whom he buys his wholesale goods, or to whom he vends "articles made for exportation."

This kind of boy, nursed in the lap of comfort, educated with care, and of good morals and manners, is provided with a box, instead of a sea-chest, full of clothes, none of which, from the white shirt with its frill on to the white cotton stockings, carefully double-heeled by his anxious mamma, are of any other use to him, than to convince him day by day, that some of his shipmates do not exactly know the difference between mine and thine.

He is sent on board in charge of his eldest brother ; they are civilly asked down into the cabin, by the Mate or Master, who naturally, and in sincerity promise to treat the boy well, which, in the general seafaring acceptation of the word, means "they won't thrash him." His elder brother gets one, or perhaps two glasses of grog, which combined with the novelty of everything around him, makes him return home, praising the ship as a perfect paradise.

The Mate returns to his duty, and the boy is shewn to a little square hole called a scuttle, below which is darkness visible, and there he is informed he must eat and sleep,—the last blessing to be gained, after he has duly collected all the fragments of supper, trenchers, platters, &c. and swept out this den, called a forecastle. He is then subjected to a

court of enquiry, as to who he is; and as soon as the confession is made that he is of reputable stock, the poor boy, (already disgusted with eating without plate or fork, and with the former boy Jack upsetting his tea into the lid of the aforesaid box), is told somehow in manner following: "Oh, d——n your eyes, you are come to sea to wear your old clothes out, are you?" Then boy Jack says, "He's afraid his tea will have wetted his clothes," and then an overhaul is instituted, to see if such be the case; and boy Jack soon discovers that he has an old pair of trowsers that will fit the Newcome exactly, and he shall have them for two shirts, which said shirts make 2s. 6d. at the pawnbroker's, or he sells them to the steward for two bottles of rum, (ship's). Jack then very kindly advises him not to keep his key in his pocket, for fear he should lose it, but to stow it away where he will shew him, and in the course of 48 hours or so, poor Newcome's box is denuded of half its contents, from Jack knowing where the key is stowed. The evenings and few leisure hours allowed to seafaring men are passed in language, which, although to them a matter of course, is to the poor boy disgusting and obscene, and he turns into his berth, if he has one, heart-sick, bewildered and shocked.

Previous to this boy going to sea, he is taken to the owners or agents, where his indentures are read over to him, and he has it explained that he must, on no account, see any embezzlement of the ship's property, without mentioning such a transaction to the Mate or Captain. Now, still suppose this boy living forward, and his rectitude of feeling unshaken. If he, poor fellow, should (what is in sea-phrase) called blow the gaff, or in other words, expose a robbery committed by the men, by making the Captain acquainted with the fact,—Heaven help him! No West Indian slave of former days, (now to all intents and purposes master,) ever had the bitter revilings, and heavy kicks and cuffs this poor lad comes in for. Everything wrong is laid to his charge, and if he have courage enough to attempt a vindication, some great horse-marine of a fellow, whose look-out the lad has refused to keep for him, sings out, "*I seed him do it vith my own hies,* ax Blll, if he did'nt." Bill, of course, says "yes," and the poor lad goes to leeward, because he has "*peached.*" On his return home he bitterly complains to his father of his treatment at sea, who does not care to go to the owner, because said owner is "Cr. by Balance Hhds. Sugar," &c. so he goes on board, where he finds the Mate, who says the boy is idle, and has a bad name in the ship. The first reproach gained, how? Because jobs set before him the first time in his life, were never explained to him, and he is d——d into fear and amazement for not doing them forthwith. The second,—because his honesty in exposing fraud was neither supported nor praised, and the thief and true man allowed to live in hate together.

What is the consequence of all this? The boy enters on his second voyage with feelings and thoughts such as the following: "Why should I," says he, "split upon Bill Sharp, or Tom Sly for robbing the Second Mate's chest, or broaching a cask, or any other theft; see what I got for it last voyage, kicked by all hands forward, and unnoticed by the Captain. I won't steal myself; but let every one look to his own, if I'm to be thrashed for telling." Well, the next thing he finds out is that swearing is a most manly expression of feeling, and he "d——s

his eyes and limbs" accordingly, to prevent some other person doing it for him. Chewing and smoking follow next, and then, the glass of new rum he loathed at first, is craved for with a zest, which often presents the drunken apprentice long before his time of service is out. He is now a smart lad, but, as the Mate says, rather wild. That is, he has been under the doctor's hands. The woman at the eating-house says, she can't have him any longer, and his father has discarded him for making his youngest sister and eldest brother drunk, and lashing the tails of the old fat spaniel and thin tom-cat together, and hanging them over the bannisters of the garret landing-place.

His time is now out, and he is made Second Mate, because he writes the Mate's log, (he not being clever at the pen), and copies his cargo-book in harbour, and besides, he has served his time in the employ, and knows the way of the ship, and where to lay his hand on boatswain's stores, &c., and when he has a charge, he'll be steadier. In 99 cases out of 100 how vain this hope has proved itself to be.

This new Second Mate is found incompetent, from drunkeness, or absence from his duty, and broke ; he leaves his employ, and enters before the mast in some other, where he is acknowledged as a smart man, and thorough sailor at sea, and a useless mutinous drunkard in harbour ; and such he remains, until intemperance and poverty make him the destitute vagabond we so often see in the garb of a seaman. This last may seem an extreme case, and I admit it is so, but I have seen no less than five instances of well educated boys brought up as apprentices in a ship's forecastle, who have turned out dishonest, drunken, and disobedient seamen ; their learning gained at school, made use of in their becoming sea-lawyers—men of all others on board the most likely to set a ship's company by the ears, (however comfortable), and turn the vessel into a little bedlam.

Of the third apprentice, the man-boy whose habits of dissipation are already confirmed, whose want of application is proverbial, and who sets obedience and duty at defiance on shore, enough of him to say is,—those who think *him* fit for a profession, (in which even a fair berth as to merit and ability, can but be gained by a life of exertion and hazard) have made a most fatal mistake ; and those who will ship such overgrown, idle, profligate lads, for the purpose of entering them in the articles as men and *seamen* too, deserve to lose the ship they try to work with such hands, to the ruin of the real ready sailor, who has to work for himself and this monkey raised upon into the bargain. This hobbledehoy too, after a year's trial of apprenticeship to the sea, generally annuls his indentures, by running away from his present employ, to enter as ordinary seaman in some other, for the sake of getting 30s. a month, and being called a man. Well, what have you to do ? he says he can hand, reef, and steer, and when you ask his character, out comes some forgery or other, which you, who have no other means of rebutting, must take for granted, and ship him accordingly, if about to sail.

This same youth shall give you more trouble in every way, than a whole crew of good men, if you only knew where to get them. In point of fact, what can he do ? His abilities consist in an intuitive knowledge of grog-time, dinner-time, and how to play Tom Cox's traverse. Send him up to hand a sail, and he'll stand on the cap and hold on by the

mast, till he has robbed it of all its grease for a fathom up. Send him to help to reef a topsail, and you'll find him stuck to the lee quarter of the yard, like glue, holding on for very life, the man at the weather earing having the exclusive privilege of hauling him as well as the sail to windward. Ask him to steer, and with the ship two points out of her course one way, you'll find him with his helm hard up till she is as much beyond her course the other way, when down it goes hard over again, making a dead loss of passage through the water in a direct line, of one mile in seven, which in a deep laden ship is no small drawback on the hopes of a fair passage. Set him to splice, or serve, or put a seizing on a rope, and your property and patience are alike wasted, and if you remonstrate, he will give you the rough side of his tongue.

I had once an Irish lad of this kind, named Sullivan, who was as ignorant of a sailor's duty as a horse, but always willing and civil, (a wonderful exception to a general rule). I set him once to make a long splice, and, after fumbling at it for two hours, on my approaching him, he looked up at me and said, with a face full of the most provoking simplicity, "Did your honour call this a long splice?" "I did," says I, "Sullivan." "Then, by Jasus," says he, "ye may say that, sure for I'll never finish it."

Yet these very lads so brought up on board, are at some future day expected to become sober, steady, honest, intelligent, and able officers, and at length captains. If it is true that no one can touch pitch and be undefiled, they have little chance of being so in any way. If a poor, though well-intentioned boy was permitted to live, for the first voyage or two in the aft-deck with the Second Mate, Boatswain, &c., and now and then shewn about half as much kindness by the Captain as is lavished on his dog, he would be quite as sensible of and as grateful for it; and the civil explanation of his proper way to set about his perfectly new and strange duties, would produce more implicit obedience, than the eternal bullyings and startings which boys so often unmercifully receive. In nine out of ten cases of this sort, where you beat one devil out, you beat ten devils in; and the boy who would otherwise look up to you with respect and regard, wishes you, from the very bottom of his heart, overboard. I do not mean to say that boys don't require a rope's-ending sometimes; far from it, they do; and let them have it for some repeated offence previously warned of, but not for a sin of unintentional ignorance they were never cautioned about; and then give it them for a full due, and do not be continually ringing the changes of kicks, cuffs, and curses on their devoted heads, which is too often their unhappy fate. However this may be scoffed at, it is true, as exemplified to the letter on my own stem and stern, during a three year's service in search of black diamonds in Shields for the port of London.

Chapter the Second.

Contains a Fair Demonstration of the Situation and Prospects of the Foremast Man afloat and on shore, and the General Causes tending to Desertion abroad, Insubordination, and often Mutiny.

We will begin with signing articles.—A number of men, all decently

ceived; and I had once on board a man thick-headed and thick-set, with black whiskers, good face, and altogether a regular hard-a-weather-looking fellow, who was not worth his salt, but who would be mistaken for a sailor by any one who had not been treated with a cruise in his company.

Begging no pardon for this digression, I will return to the supposition of having a decent crew; that is, all hands can steer, most of them can strop a block, make a decent long splice, and lie out upon a topsail yard; hauling, instead of holding-on, when they are there. In ten cases out of twenty, what is the fate of these poor fellows? They are exactly placed on a par with a cab horse, which animal, whilst he has head, legs, and tail, he must go; and the sailor, whatever his ailments may be, whilst he can stand on end, and is capable of locomotion, work he must, or daily curses are heaped upon his devoted head. No one ever dreaming that the man can possibly be sick or sorry; and when the boy tells the Second Mate that such is the case, in a day or two when the man is missed from his work, and the Captain asks for him, he is told the man is sick, when he desires the Steward's boy to take him a panakin half full of salts, allowing him the indulgence of taking them with or without water, as he may think fit.

Now, there is an old and a true saying,—that where little is given little can be expected; and as regards sailors, no class of men, have of necessity, so small a knowledge of the world, or such little chance of having received a moral education, sufficient to make them act on principle, instead of impulse; and if, in exchange for kindness shewn them by their Captain, some defaulters are found, devoid of propriety and good feeling,—one good man's gratitude ought to compensate for the bad conduct of many. In point of fact, sailors taken full and bye, or in alongshore phrase, on the whole, are not the heartless, worthless set of men many people please to depict and think them. Mind you, I mean sailors; not your know-nothing ragamuffin set, who force themselves on board ships, because Captains have no means of detecting them. But seamen in general are sensible of kindness and grateful for it, as is seen by a willingness to obey your orders at sea; indeed often to anticipate them, and an obstinate determination to execute and accomplish the most arduous duties, in defiance of wind and weather. And, if they do get drunk in harbour, (once in a way), the sober man's conduct at sea should not be wholly forgotten, but rational, though strong reproof and censure, given quietly, and in moderate language, will go further towards shaming the man from a repetition of this act, than the too often practised mode of sending his soul to perdition with curses, in the face of his shipmates, whose ridicule on the occasion he feels more strongly than your swearing.

One great cause of grumbling with sailors in the merchant service, (and I think a very just one), is the total want of a fit place for a man to put his head in below in the shape of a forecastle. Now, I do contend on the behalf of the foremast man, that if, in the midst of wind and rain, frost and snow, he does his duty as a man ought to do it, he is in fairness entitled to a dry and and decent shelter for his wet and weary body; and, in point of fact, if he is not possessed of this comfort, he, (at the expiration of his four hours' below) is unwilling, and often unable,

to renew his duties on deck, and much consequent swearing and growling is the inevitable consequence.

I do not assert this to be generally the case, but in many ships it is so, for instance timber-ships, the forecastles of which are thrown open, and nearly filled with deals, &c., &c., allowing just room for a man to crawl about on his beam ends, and that in darkness and deprivations of every kind, often in the Autumn and Spring months, under the lash of incessant bad weather, and bitter cold,

The newly introduced top-gallant-forecastles too, for small ships of 300 tons, are just as bad as none at all in bad weather; for, with your chains bent, hause-holes open, windlass bulk-head cleared away from starboard to port, and the ship pitching bows under, which, with the extra weight of a top-gallant-forecastle, she will do ten times as often as without one, your forecastle deck is deluged in water, and exposed to every blast of Heaven, your mens' chests floating away into the lee scupper, and their clothes soaked in salt-water.

If a Captain had a top-gallant-cabin on the same principle, he would very proporly complain, that if he could not have comfort below, he could not work the ship as he ought. The sailor, though he dare not openly say it, d——ns both Captain and owner quite as heartily.

In some ships too, men are never allowed a washing-day, and are consequently always dirty, having no spare time to do more than give a privateer's wash to a pair of trowsers. This ought not to be, for cleanliness in a ship is of infinitely more importance than on shore; circumscribed limits being a dreadful drawback on health in hot climates, even if kept ever so clean. One afternoon a week at least should be set aside as washing-day; and if men are willing and steady, and short of soap, give them a bar; you'll get it again some bad night, wearing ship, or reefing top-sails, in the strong hand and willing heart.

But of all things, give to the Lord's Day the Lord's Holy Word. I am not going to preach. But I do and ever shall most strongly deprecate the system of passing over the Sabbath at sea, without some attention to its duties. Instead of which, in some ships, (as if for the sake of keeping men at work on the only day of the seven, they may fairly expect rest), holystoning decks, and a variety of other petty jobs, are the standing order of the day; to the sailor's great discomforture. In lieu of this, make him clean himself; muster all hands aft, and if any one is dirty, stop his grog if he repeats the offence. Read them Divine Service, and lend them two or three old books to read, and it will save you the pain of hearing bad language, and tend to gain their good-will, which said good-will, however little it may be valued as essential, no man can get his work done well and quickly without. And, most undoubtedly, no man will ever make a worse seaman, for attempting to set the example of a good Christian. A duty strictly imperative on the Captain of a ship, whose flock have seldom a better knowledge of God's Holy Word, than its abuse and blasphemy.

Many people say, when a man is in five fathoms water, he may do as he likes,—and some persons follow up this practice on Sundays at sea, by allowing and joining in chess, drafts, cards, &c., &c., all day. Are the men so blind as not to see this, and comment upon it? will it gain their good will or opinion, or is it what ought to be, or what a ship's Captain, on

shore would allow in his own house or join in in any other? no, certainly not; then why set an undeniably bad example to men, who are on all hands readily enough acknowledged to be unreclaimable and graceless blackguards.

I am firmly convinced that sailors generally, under the influence of kind treatment, are not ungrateful. By this I mean if he is sick; see him personally in his hammock below, if he cannot get to you, and speak to him kindly and spare a crumb from the rich man's table for his support and better nourishment,—when he is well, you will find a link of good feeling welded between you and him, as exemplified in his anxiety to please and obey you. And if this sort of conduct does not meet its proper return, ill-usage and undue severity cannot gain a better; and in the first instance, at least you have the approval of your heart and mind, as well as that of every good man in your ship.

I know it is a precious up hill fight, when a Captain finds all his good deeds, repaid in base ingratitude, drunkenness, and often open rebellion, but it seldom or never happens that all hands do this, and it is not fair to punish the innocent for the guilty. As even in self defence, I have always found the kind word and quick order, work far better than the harsh command, ungraciously uttered.

Another and I think also a just cause of complaint among sailors in merchantmen, is, as regards the quantity and quality of their provisions, and in some ships they are certainly bad enough; though this penny wise and pound foolish system is now nearly exploded.

On a passage to the East or West Indies where a man's physical powers are seldom called forth whilst his ship is running down the trades, bad or short allowance of provisions is of not the same consequence as when he gets to his port, where under the rays of a tropical sun, breathing the malaria of yellow fever or cholera, the English seaman is expected to do, and does more hard work in twelve hours, than a native ever does in three days. This work he is stimulated to do, by receiving four glasses of rum a day, under the influence of which said rum; if he has any real or imaginary evils to complain of, he finds courage enough to advance them in too often a most violent and mutinous manner. The result is that the Captain is compelled either to apply to the civil powers and send the man to goal, or to enact the old system of knocking him down, or to stop his grog. The effect of all this generally is that the man as soon as possible, watches a slant; steals the ship's boat and is off, for the two purposes of getting clear of a ship he hates and getting more money for the run home in another than all his previous wages would come to. Many worthless vagabonds do this constantly and systematically, leaving England in one ship (having month's advancement and monthly note in hand) for the mere purpose (if possible) of running from her, to run home in another; who being short handed from losses by fever, &c., is glad enough to get him at any price.

Another and very serious evil, Captains become unwittingly involved in, from the present want of system in shipping hands in England is this:—men come on board and are shipped in apparent robust health, but in almost every crew you engage, after a week's absence from London, you find three or four and often more of them suffering from venereal complaints, which eventually, often incapacitate these men from their duty most of the voyage. To the great annoyance of the master, extra labour

to the men who are well and willing; and often in the channel in winter to the danger of the ship. Nevertheless these invalid idlers must be fed and paid their wages, to the Owners great loss and the injury of all hands.

I have here put forth some of the causes through which seamen lose, or rather never gain an interest in their ship, strong enough to make them wish to join her again, or care a button about her. As soon as she enters the dock basin away they go, as if fleeing from plague, pestilence, and famine, and a routine of senseless drunkenness and lavish debauchery is their fate, till poverty compels them to seek another ship! Would it not be better, that these men should willingly be employed refitting their ship for sea, in lieu of riggers, who (with all due respect be it spoken) often leave a Captain the exclusive privilege, on his passage out, of doing their work over again; I think so, and though the old saying of "washing a black fellow white" stares me full in the face, I am hardy enough to believe I can lay down a plan which will at any rate greatly forward such a measure.

It is proper to remark here, that in the event of having a bad ship's company, though the dreadful annoyance of being unable to control them, falls of course on the Captain and officers; the loss of time, plunder of cargo, and waste of every kind made by them, as inevitably falls on the Owner himself; often producing a lapse of time, that in a falling market, may lose him some thousands of pounds.

As regards that class of society called crimps, I believe I am right in stating that nearly all are either publicans, or venders of slop clothing for seamen. No discredit in any way to them, far from it. I will also even suppose every crimp an honest, upright, and well inclined man, in a moderate way, and that through these persons you are doomed to receive your men's characters. On what footing do you get this reference? The sailor is in ninety-nine cases out of a hundred, head over ears in debt to the crimp, whose only possible way of re-payment, is getting the man a ship, that he may touch his month's advances and monthly note or allowing him to eat and drink him out of house and home.

The natural consequence is; that the sailor is begged to be steady and proper if he gets a ship, and pledges himself so to do, and on the strength of this assertion, the crimp makes a compromise with his conscience and gives him a character; and be he good or bad you reap the fruits of this most spurious mode of knowing the truth of the case. In making this statement I am not offering personal reflections on the reputations of crimps; I am only wishing to shew that the basis on which they are obliged to act is equally injurious to merchants, owners, and masters particularly the last.

(*To be continued.*)

LOOK ABAFT.

London, February, 1845.

SIR.—Upon a re-perusal of your vol. for 1839, I was struck with the large amount of "local deviation" of the compass on board H.M.S. *Hastings* in 1838. I am now about to claim your indulgence by relating a case to the same amount, but in the opposite way.

In 1838 I sailed from Cork in command of a transport with 600 troops on board for Quebec.

I took a departure from Cape Clear, and with a fresh breeze at south steered W.N.W. by compass, imagining I should make a true west course. On the first day no observation was obtained, but on the second I found the ship had made a true W.N.W. course, I hauled up W.b.N. and found the ship to make that course true.

Upon getting the azimuth compass on deck for an azimuth, and placing it on the starboard side of the poop, I found two points difference between it and the binnacle compass. I soon perceived the north point of the compass in the binnacle was drawn two points aft, and upon letting the ship's head run off, the diff. of the compasses gradually decreased until they both agreed with the ship's head at north.

The cause was soon explained: this ship in addition to the iron tiller abaft, wheel chains and gear, and iron spindle of the wheel, (all so common at the present day,) had a large iron spindle from the poop deck which shipped into the rudder-head immediately below it into the gun-room, and (as is also very usual) but one binnacle placed amidships, which position I infer increased the attractive power of the mass of iron abaft it.

I have since, frequently seen several ships with fully as much iron abaft the binnacle, as the one in question (for instance Rapson's steering apparatus and others) and also a single binnacle which is generally placed very near the wheel, frequently in the after cabin skylight, thus it is a fixture. Now Sir, any ship whose binnacle compass is similarly affected, outward bound for instance, after shaping a very good course for the night or in thick weather from a fair berth off Dungeness or Beachy Head, would be greatly favoured by circumstances if they were not brought up by the Royal Sovereign shoals or the Owers.

If you think the above worthy a place in your useful and instructive work, it may cause some of my brother skippers to look abaft before leaving port, which is my only motive for troubling you, claiming the indulgence you invariably show to your old subscribers.

I am Sir, &c.,

ONE FROM THE UPPER SCHOOL GREENWICH.

To the Editor, &c.

FOREIGN STEAM-VESSELS.

A highly important and interesting return has been just published by order of the House of Commons, on the motion of Admiral Dundas, M.P., of the number and quality of steam-vessels in foreign ports in which her Majesty may have consular agents. The return, although a few statements have not yet been received, includes most naval stations of importance in the four quarters of the globe; but in order to render sufficient justice to the particulars thus detailed, we propose to devote our limited space to an account of the French mercantile steam navy exclusively.

Commencing with Calais, we find that there are in that port 3 steam-vessels, each capable of carrying from 10 to 12 12-pounder carronades, and from 70 to 90 men. The largest, Le Courrier, is not so strongly built as the others, and therefore less adapted for an armed vessel. None of them are good sailers, or so well calculated for the service they are employed on as the mail-boats belonging to Dover; nor would they, as armed vessels, be calculated for any other than Channel or coasting service, as they are incapable of carrying sufficient stores and provisions for a long voyage. Their tonnage does not exceed 51 and 65.

In the port of Boulogne, next in importance, there does not appear to be one steam-vessel, for the return is *nil*.

We next proceed to the "Liverpool of France," as it is called, Havre-de-Grace. In this port there are as many as 41 steam-vessels, varying from a tonnage of 43.56 to 231.56; 12 were built by English engineers. The length of these vessels averages about 130 to 140 feet, and the breadth about 20 to 22 feet. On the subject of armaments, the Consul states that it is impossible to give any positive information, but he begs to submit that, being built for commercial purposes, all the largest vessels, ranging from 200 to 230 tons, would be incapable of carrying any weight of metal without considerable strengthening, especially of the upper works. The greater part of these vessels are employed for freight and passengers, and a few for towing, &c.

At Granville there is no steamer belonging to the port. An English steamer belonging to Southampton, of 80 tons, takes passengers once a week to and from Granville and Jersey, during six months of the year from May.

At St. Malo there are 2 vessels, one of 195, and the other of 60 tons. La Bretagne runs between Havre and St. Malo, and uses a kind of Archimedean screw; it has just begun to run. There are British steamers which leave twice a week for Southampton, of about 180 tons each.

At the great naval port and arsenal of Cherbourg, in Normandy, there are no commercial steamers. The men-of-war steamers which are built there are not attached to the port. There are three or four small steamers employed at the dockyard for working at the breakwater and conveying the materials thereto. A French steamer, the Colubric, comes from Havre to Cherbourg once a week.

At the grand port of Brest, in Britanny, there are 2 mercantile vessels, but not capable of carrying any armament, 2 Government vesssls, the corvettes Pluton and Archimede, each 196 feet in length and 29½ feet breadth, and of which the draught of water is 19 feet 7 inches, and the horse-power 220. Each is capable of carrying six 30lb. howitzers. The tonnage of French Government vessels is never stated. There are also 3 transatlantic packets, 226 feet in length and 42 in breadth, with a draught of 19 feet 6 inches, and a power of 450 horses. They can carry four 30lb. howitzers and four swivels. These vessels, built ostensibly for packets, remain ready for armament as frigates.

At Nantes, at the mouth of the Loire, there are altogether 20 vessels varying from 22 to 156 tons, and from 12 to 70 horse-power. This is not a very formidable armament, especially if the Consul's report be true, that not one of these boats could be armed with a 4-pounder in their present state; and if strengthened, then only those for Bordeaux (4 in number) with light guns.

At Charente there are 4 steam-vessels, not one of which is capable of carrying an armament. They are in fact chiefly built for river navigation, and too narrow to carry guns. Each of these boats is navigated by a crew of 7 men.

At Bordeaux there are 27 steam-vessels, varying from 27 to 85 tons, and 14 to 80 horse power. They are all built for river navigation, of iron and wood, and not one is capable of carrying any armament.

At Bayonne there is one steamer of 500 tons, and 120 horse-power. It carries 4 guns, and is kept solely for the purpose of towing vessels into and out of the river.

At Marseilles there are 10 vessels, whose tonnage varies from 240 to 600, and from 60 to 160 horse-power. Mr. Turnbull, the Consul, has no means, he says, of knowing what guns these vessels would carry, but they were built as commercial steamers, and not to carry artillery.

At the ports of Corsica there are 4 small vessels, all incapable of carrying armaments. There are 3 Government steamers, of 120 horse-power each, commanded by Lieutenants in the French navy, and employed in the post-office service between the island and Marseilles.

So far the French would not appear to possess very great resources in their mercantile steam navy, should contingencies arise rendering it necessary or politic to make an increase in the number of their war steamers.—*Times.*

Harbours of Refuge.

(*Concluded from p.* 152.)

Dover.—History affords proof of the importance attached to this place as a military and naval station.

As the advanced post of England on the south-east coast, the want of a harbour here of sufficient capacity for the reception of vessels of war, and for the convenience and protection of trade, has attracted the notice of Sovereigns and Ministers from the earliest times, and has led to a large expenditure of money for the improvement of the present tidal harbour.

In considering positions eligible for the construction of breakwaters, it should be borne in mind that an inner harbour is an indispensibly requisite; and, if there is no natural advantage of that sort in the position selected, there must be the double operation of building an inner as well as an outer harbour.

There are few places that in this respect possess greater advantages than Dover. It has a dry dock for repairs, and extensive quays with storehouses. Besides the outer receiving harbour, there is a bason covering more than six acres (now being enlarged to double that size), and a third, called the Pent, which the late Mr. Rennie in his report to Mr. Pitt, in 1802, says may of itself be made capable of receiving many sloops of war and gun brigs, and which the Dover commissioners are now considerably improving.

Mr. Pitt, when Lord Warden of the Cinque Ports, was earnestly intent on having Dover Bay enclosed, and it was this circumstance which led to our obtaining from the Master-General of the Ordinance the plan of a harbour in Dover Bay, by the late Major-General Ford, of the Royal Engineers.

There are two points, each of great importance, which have been suggested as objections to any proposal for converting Dover Bay into a harbour; one, that the holding-ground is good; the other, that it will have a tendency to silt up.

With respect to the quality of the anchoring ground, her Majesty's steam vessel the Blazer, of 500 tons, and 120 horse-power, was ordered there to test its tenacity to the utmost. The nature of the experiments, and the satisfactory result, will be seen in Capt. Washington's report in the appendix.

In reference to the question of silting up, the commissioners directed samples of the water in Dover Bay to be taken up at different times of the tide, in different depths, and under varying circumstances of weather, which have been transmitted to the director of the Museum of Economic Geology for examination. The result, as reported by Mr. Phillips, will be found in the appendix.

The committee is of opinion that more extensive experiments are neces-

sary, in order to determine the quantities of matter borne in suspension by the tidal currents on this part of the coast, and liable to deposit; and beg, therefore, to suggest to your lordships the propriety of their being continued under the direction of the Admiralty for the space of a year, in all circumstances of weather.

Dover, situated at a distance of only 4½ miles from the Goodwin Sands, and standing out favourably to protect the navigation of the narrow seas, is naturally the situation for a squadron of ships of war. Its value, in a military point of view, is undoubted; but the construction of a harbour of refuge there is, in our opinion, indispensible, to give to Dover that efficiency as a naval station which is necessary in order to provide for the security of this part of the coast and the protection of trade.

Dungeness.—This place is a singular formation of shingle, spreading over a space of several miles, stretching out seaward into the fairway of the channel, and having at its termination deep water close to the beach. It is without building, except the lighthouse and several batteries, the barracks of which are occupied by the coast-guard.

The point of Dungeness has lengthened out considerably since the present lighthouse was built, in 1792. There is an inscription within the tower, by which it appears that at the time it was built the sea was at a distance of 100 yards at low water. We, on our visit to that place, measured it, and found it to be about 190 yards, showing that it had lengthened out 90 yards in 52 years.

It is to be regretted that no periodical account has been kept of the lengthening out of the point, which if it had been taken every year, and registered in the lighthouse, would have afforded information of great importance and would have shown whether the rate of elongation has been uniform or otherwise. The commission consider it very desirable that an accurate record be preserved hereafter of all alterations of Dungeness point and its immediate vicinity; of its annual extension seaward; of the effects of great storms upon it; and generally of the movement of the shingle. For this purpose the commission beg to suggest that the Admiralty, in conjunction with the Trinity-house, be requested to give directions on the subject.

Dungeness has ever been remarkable for its good holding ground. Both bays afford excellent and extensive anchorage, according to the state of the wind. It is in evidence that upwards of 300 sail have been sheltered in the East Bay at one time, and that more than 100 vessels were at anchor in the West Bay a few days before the commission arrived there. Where nature presents so much accommodation and shelter, it will always be a matter for serious consideration whether it may not be well to be satisfied with what is already so good, and to give to other places of acknowledged importance, in point of position, the artificial assistance they need, in order to render them available as places of secure anchorage. Dungeness does not possess the advantage of an inner harbour, as Dover, Seaford, and Portland. This, however, takes nothing from its value as a roadstead for merchantmen and for ships of war.

Having come to the conclusion that it was not expedient to construct a breakwater at Dungeness, we do not advert in detail to what has appeared in evidence as to the effects which such a work would be likely to produce on the lengthening or otherwise of the point, and on the anchorage in the East and West Bays; but we refer to the opinions of several eminent engineers touching the advantages of this important place.

Beachy Head, Eastbourne, and Seaford.—We have to draw your lordships' attention to the bay on the east side of Beachy Head, and westward of Langley Point, which the commission of 1840 proposed as a site for a breakwater.

The shoals called the Royal Sovereign, and others, as laid down in the Admiralty chart, first attracted our notice with reference to this work; it

was, therefore, thought desirable to have a more detailed and extended examination of the bay by the surveying vessel placed at our disposal by the Admiralty.

The result has been the discovery of several other patches of shoal water, as shown in the accompanying chart, and our previous impression as to the hazard of placing a harbour of refuge in such a situation has been so strengthened that we decided to look for a more eligible one on the west side of the Head. There is no inner harbour or opening along the coast on the east side of Beachy Head.

On the west side of Beachy Head the anchorage is free from the dangers which render the east side less eligible as a place for constructing a harbour of refuge. The holding ground off Seaford is of the best quality, and is much resorted to in easterly gales.

The commission is of opinion that there is no good position in the neighbourhood of Beachy Head, where a harbour is as necessary as in any part of the Channel, (being about half way between Dover and Portsmouth), except in Seaford Road, and the accompanying chart shows the place where a breakwater may be constructed with great advantage to the trade, and as a station for armed vessels.

The commission is fully aware of the objections which may be made to the formation of a breakwater harbour on the west side of Beachy Head, considering the prevalence of the westerly wind; but the local disadvantages on the east side of the head induce it to give a decided preference to the west side—the proximity of Newhaven has materially influenced their decision.

Newhaven.—Newhaven is a convenient tidal harbour, and may be considerably improved inwardly, as well as by carrying out a breakwater from "Barrow Head," into a depth of three fathoms at low water spring tides; by advancing the piers seaward, giving a wider entrance, and dredging the channel enclosed between them; but as it cannot be made accessible at all times of tide, it does not come within the scope of our instructions to recommend any present outlay of the public money for this purpose.

It will be the interest of the commissioners of the Upper and Lower Ouse to apply their revenues to the utmost advantage so as to give increased facilities of access to the harbour, should a breakwater be constructed in its vicinity.

Portland and Weymouth.—Our next and last visit westward was to Portland, which, from its situation with reference to the Channel Islands, and as the boundary of the narrow part of the Channel in this direction, came naturally within the range of our investigations.

A squadron stationed at Portland will have under its protection, jointly with Dartmouth, all the intervening coast, and these places, with Plymouth, will complete the chain of communication and co-operation between Dover and Falmouth, a distance of 300 miles.

There is everything at Portland to render the construction of a breakwater easy, cheap, and expeditious, and the holding ground in the road is particularly good. A large part of the island facing the bay is Crown property, and contains abundance of stone. It has numerous springs, and plenty of the best water may be had in any direction for the supply of ships.

The roadstead also possesses the advantage of an inner harbour at Weymouth.

Harwich Harbour.—We have now to submit to your lordships a few observations respecting Harwich harbour, which we consider one of very great importance to the trade of the country.

This river formed by the junction of the rivers Stour and Orwell, is one of the finest, and may be rendered one of the most useful havens in the kingdom. It has a sufficient depth of water and good holding ground over an extent capable of containing many hundred ships.

But, with an exception of a channel of 18 feet in depth, too narrow for general purposes, the entrance to this port is not deep enough to admit ships of more than 12 feet draught of water at low spring tides; it is therefore at present a tidal harbour as regards ships of a larger class.

It is remarkably well situated for the convenience of a north sea squadron, and for the protection of the mouth of the Thames.

It is the only safe harbour along this coast, and is in the direct line of traffic between the Thames and the northern ports of the kingdom, as well as of the trade from the north of Europe.

There is a dockyard, with building slips belonging to the Crown, and the property under the Ordnance Department is extensive.

It appears in evidence that by the falling away of Beacon Cliff, on the west side of the entrance, and the lengthening out of Languard Point, on the east side, the harbour has sustained great damage within the last 25 years.

The bottom to the entrance to the harbour, and the coast on each side, are composed of blue or London clay, in which are layers of "cement stone," in great demand both in England and on the Continent. Hundreds of hands are constantly engaged in collecting it, and the evidence shows that by excavating the cement stone in front of the Ordnance premises, near the foot of Beacon Cliff, the water has spread so as to be diverted from its natural course, and the tide rendered so comparatively feeble, that it no longer acts with its accustomed force on Languard Point, which has constantly grown out 500 yards during the past forty years, as shown by the plan. It has already nearly filled up the deep water channel, and by its further increase threatens to destroy the entrance.

In the appendix there are reports to the Admiralty, from the officer carrying on the surveying service in the neighbourhood of Harwich, to which we beg to refer for a full confirmation of our opinion of the necessity of taking immediate measures for the preservation and improvement of this harbour. If this be not done soon, it is impossible to calculate on the extent of mischief which may take place; for, on every south-west gale the Beacon Cliff is in peril of being washed into the sea.

We, therefore, feel it to be our duty to submit to your lordships the pressing necessity for carrying out a breakwater or stone groyne, from the outside of the Beacon Cliff, so as to surround the foot of it, and to extend the same over the shoal-water to the north part of the Cliff-foot rocks, as described in the plan No. 6.

We also recommend deepening the channel to the harbour to 18 feet at low water spring tides, by removing the shoals called the "Altars," and the eastern part of another shoal called the "Glutton."

Proposed Breakwaters.—"Having made such observations respecting the different ports as may be necessary to enable your lordships to form a judgment on the proposals we have to submit, and having given to the subject referred to all the attention which its importance demands, we recommend:—

"First—That a harbour be constructed in Dover Bay, according to plan No. 1, with an area of 320 acres up to low water-mark, or 380 acres without the two-fathom edge: with an entrance 700 feet wide on the south front, and another of 150 at the east end.

"Entertaining the strong opinion we have expressed of the necessity of providing, without delay, a sheltered anchorage in Dover Bay, we venture to urge upon your lordships' attention the advantage of immediately beginning the work by carrying out that portion which is to commence at Cheeseman's Head.

"Whatever may be finally decided upon as to the form and extent of the works in Dover Bay, the pier from Cheeseman's Head run out into seven

fathoms water, appears to be indispensable as a commencement, and it will afford both facility and shelter to the works to be subsequently carried on for their completion.

"This will give sheltered access to the present harbour during the south-west gales, and protect it from the entrance of shingle from the westward; it will afford time also for observation on the movement of the shingle within the bay, and for further inquiry as to the tendency which harbours of large area, on this part of the coast, may have to silt up.

"These inquiries the commission consider to be of essential importance, and the results will afford the means of determining on the greater or less width that should be given to the entrances of the proposed harbour.

"Secondly—We propose that a breakwater be constructed in Seaford-road, in depth about seven fathoms of water, one mile in extent, and sheltering an area of 300 acres, as shown in plan No. 2.

"Thirdly—That a breakwater be constructed in Portland Bay, to extend a mile and a quarter in a north-eastern direction, from near the northern point of the island, in about seven fathoms of water, having an opening of 150 feet at a quarter of a mile from the shore, and sheltering an area of nearly 1200 acres, as shown in plan No. 3.

"If only one work is to be undertaken at a time, we give the preference to Dover, next to Portland; and thirdly to Seaford.

"Mode of Construction.—Various plans for constructing breakwaters have been laid before us by highly intelligent individuals, whose projects are noted in the Appendix, and fully explained in the evidence.

"We are directed by your lordships to report on the expense to be incurred by the completion of the works which we recommend; but as no approximate estimate of this can be made without determining the general principles and modes of construction, we have examined the engineers, who have come before us and other authorities upon these important points.

"The various opinions have been considered by the commission, who prefer for the construction of breakwaters, and for the security of the works of defence upon them, the erection of walls of masonry.

"The commission do not offer any opinion as to the profile or degree of slope necessary to insure to the structure the requisite stability. They consider that this will be best decided by the Government under professional advice, when the works shall be finally determined on.

"The cost of either mode of construction having been stated to be nearly the same, whether it be masonry or a long slope of rough stone similar to that of Plymouth breakwater, the commission beg to lay before your lordships an approximate estimate of the works at the several places, viz.:—

"Dover	£2,500,000
Seaford	1,250,000
Portland	500,000
Harwich	50,000

"Military Defences.—The military members of the commission are of opinion that there will be no difficulty in providing for the defence of the proposed harbours.

"They recommend that casemated batteries be constructed on the breakwater themselves, and that these should be supported by works and defences on the shore, flanking the approach to them and to the entrances of the harbours.

"At Dover and Seaford there already exist works of defence contiguous to the site of the proposed breakwaters, capable of being adapted to this object.

"The island of Portland possesses great natural advantages for defence, and for the formation of a naval and military depot, during war, to any extent that may be required.

"The military officers are further of opinion, that the position and construction of the works necessary for the defence of the proposed harbours, cannot be decided on until the exact site and relation of the latter to the shore shall have been finally determined.

"Conclusion.—The commission cannot close their report without expressing, in the strongest terms, their unanimous opinion and entire conviction that measures are indispensably necessary to give to the south-eastern frontier of the kingdom means and facilities, which it does not now possess, for powerful naval protection. Without any, except tidal harbours along the whole coast between Portsmouth and the Thames, and none accessible to large steamers, there is now, when steam points to such great changes in maritime affairs, an imperative necessity for supplying, by artificial means, the want of harbours throughout the narrow part of the Channel.

"The distance chart, which accompanies this report, shows the positions where, if our recommendations are carried out, harbours of refuge or well protected roadsteads will afford shelter to our commerce. By these means, and with the advantages of steam by sea, and of railroads and telegraphic communication by land, the naval and military force of the country may be thrown in great strength upon any point of the coast in a few hours.

"The several recommendations we have thought it our duty to lay before your lordships must, if adopted, occasion a large outlay of the public money; but when life, property, and national security are the interests at stake, we do not believe that pecuniary considerations will be allowed to impede the accomplishment of objects of such vast importance.

"T. Byam Martin, Admiral, Chairman.
Howard Douglas, Lieut.-General.
J. D. Dundas, Rear Admiral.
J. H. Pelly.
Peter Fisher, Captain, R.N.
J. N. Colquhoun, Lieut.-Colonel, R.A.
R. C. Alderson, Lieut.-Colonel, R.E.
John Washington, Captain, R.N.
J. Walker."

"I dissent from this report, because I consider the mass of evidence to be in favour of Dungeness, and because I cannot recommend a large close harbour at Dover, where the pilots consider the holding-ground generally indifferent, and the engineers say it will silt up.

"W. Symonds, Surveyor of the Navy."

"August 7, 1844."

The South Western and Portsmouth Electric Telegraph.

The Electric Telegraph is one of the finest applications of abstract science to the practical uses of common life. It furnishes a proof, and a striking one, of the proposition that the pursuit of abstract truth, for its own sake, is a duty always incumbent on those who have the qualifications for successful research, even where the immediate consequences of that research present no apparent value; and where the *cui bono* cannot be clearly determined. Abstract truth is one of the noblest objects of human pursuit, and will endure long after the practical uses to which we may apply it are passed away.

Scientific truth is, nevertheless, inevitably the parent of good, and its votaries are ever benefactors. The philosopher is a philanthropist and a patriot, even though he may not always, like the Sage of Syracuse, be able to overthrow the enemies of his country by the engines of his science. Even while he seemingly trifles, he may be achieving the highest purposes of life. The

primitive electrician, when rubbing on his sleeve the bit of amber or wax with which to hunt a feather through the air, was preparing the first steps to a valued discovery. The thunder-rod of Franklin, and the thunder-bolt of Harris originated in the chamber amusements of philosophical speculation. When Galvani was making dead frogs dance on the table, he was preparing for one of the most important inventions of recent times—the Electric Telegraph.

Since the time of the Marquis of Worcester, if we except the Steam Engine, there has not appeared any invention more congenial to such studies as his, or more worthy of his genius, than the Electric Telegraph. It is the realization of his wildest dream, and more. "How, at a window, as far as eye can discover black from white, a man may hold discourse with his correspondents without noise made or notice taken; and a way to do this by night as well as day, though as dark as pitch is black," was one of his rarest devices. "How, from your chamber, to hold discourse with your correspondent 100 or 1,000 miles distant, so that your questions asked, and commands given, shall pass more rapidly to his ear or eye, than they would if spoken to the same person standing within the walls of your chamber!" This is the more astonishing problem, of which we have now the solution in the Electric Telegraph of Messrs. Wheatstone and Cooke.

The Electric Telegraph now on the South-Western Railway is the most important yet erected in this country, in many respects. First of all, it is to perform the usual functions of an electric telegraph for the railway, communicating orders and messages along the line according to the instructions of the directors and managers. Next, it is to serve the important use of communicating between the Admiralty here, and the Naval Establishment at Portsmouth. For this purpose, we believe, the communication will terminate in the Admiralty at Whitehall, at this end of the line, and in the apartments of the officer in command, at Portsmouth. We presume that a similar communication will soon be effected with the Arsenal at Plymouth. The South Wales line may also carry the telegraph to Milford, another of our dock-yards, and thus it will take place that orders will, at any instant of time, with the quickness of thought, be transmitted to the great naval stations of the country from head-quarters, and from each to any of the others, or information be returned from them to head-quarters, with greater speed than they could formerly be carried from the great room of the Admiralty, to the secretary in the adjoining apartment. The energy which, in case of emergency, this would infuse into every department of the service, must be of incalculable service to the country. For all practical purposes, the dockyards and arsenals of our navy may then be considered as transported from their present remote situations into the very board-room of the Admiralty, at Whitehall. This is the second use of the telegraph of the South-Western Railway: the third is to throw open to the public this means of communication at the office of the railway company, on the payment of a very small fee. When the use of this shall have become general, you will make appointments for conversation with your friends, not by taking a journey of 80 or 90 miles to London, Southampton, or Portsmouth, but by each party attending at the hour of assignation at the respective telegraph offices in the town where they reside. You will then enter the office, take a chair, and ask the telegraph "How do you do, Thompson?" At that moment the telegraph will say, "How do you do Thompson?" to your seated friend at the other end in Portsmouth. He will then, of course, reply through the speaker of the telegraph at your own end, "I thank you, Smith, I hope your gout gives you less trouble this fine morning." These preliminaries over, more important matters may be entered on and discussed without impediment, until the quarter of an hour you have paid for is expired, and you have to give way to your successor and his amiable friend. This is not a hypothetical case—but was, *mutatis mutandis*, the commencement of our own first interview (parlance rather,) through the South-Western Telegraph.

An important point is established by this telegraph, which had not formerly been decided. It was doubtful how far weather might interfere with the transmission of the electric current. The sleets, thaws, and fogs that have intervened since it was erected, have given ample opportunity to judge of this effect. It is found in fine weather the power of the current is not sensibly impaired even by transmission through eighty-eight miles; that is, the indication produced is nearly as strong at the further end, as at that from which the signal is transmitted—the diminution of power being not above 5 or 10 per cent. in fine weather. Mr. Wheatstone has employed a beautiful little volta-metric apparatus for the purpose of detecting this difference. It is an ingenious modification of the usual apparatus for the decomposition of water, rendered much more delicate. By this it appears, that the greatest amount of loss by transmission through twice 88, or 176 miles, is, in the worst circumstances, 50 per cent. By using powers therefore of double the intensity required in the most favourable circumstances, he finds it easy to insure the perfect working of the apparatus, even in the most unfavourable condition.

The general arrangement adopted on this line is that which Mr. Cooke and Mr. Wheatstone, after their experience, now considerable, have discovered to be best. The wires which communicate from one end of the line to the other, are no longer closed up in a concealed iron tube, but are conspicuous to the travellers in passing along the line. All along the railing there are upright posts, erected at equal intervals, which rise higher than the top of the carriages, and along the top of these posts continuous wires are carried in a manner similar in appearance to an ordinary wire fence. Thus all is visible and accessible, so that if defects should arise they are at once detected and easily remedied. The wires depend by porcelain eyelets from the posts, for the purpose of insulation, and are protected from corrosion by being covered with zinc. These arrangements are now so practically perfect, as to leave little more to be desired.

Two methods are used to communicate the words from one end to the other. In one plan there are two wires employed in the work—these wires are independent of each other, and give the signals by affecting each one needle. Two needles serve to give all the letters of the alphabet. The attendant stands before a plate like the face of a clock, on it are seen two hands or pointers, both these point up and down when they are affected by the electric current. When the attendant wishes to make the instrument work, he turns a handle to the right, this puts a coil on the right in communication with the positive side of the battery, and affects the needle to the right, and the moment the attendant sees this motion take place, he immediately returns the handle to its former position; the action ceases, and the needle having made one oscillation to the right, hangs vertical as at first. He has thus made one signal, for the wire which he placed in communication with the battery at this end, ends in a coil on the right of a needle at the other end of the communication, and causes it to deviate to the right at the same instant with the deviation of the needle at this end. The operator at the other end has thus seen exactly what the operator at this end has done—in short, the needle at his end makes exactly the same deviation to the right which the needle at this end has done, and at the same instant. This deviation may, if we please, stand for the letter A.

Let us next suppose that the second needle at this end, is by a second handle made to deviate also to the right, and again to hang straight down. The second needle at the other end at the same instant, deviates to the right and then hangs down; this shall stand if you please for the letter R: the attendant at this end now turns both handles at once to the right, both needles at both ends deviate simultaneously to the right, and being seen by both, are then allowed to lapse into a state of rest—this double deviation may stand for the letter E. The letters now transmitted form the word

ARE.

The attendant next makes the first needle deviate to the right, restores it and instantly makes it deviate a second time—at both ends the first needle has made therefore a double oscillation to the right: let this stand for the letter Y. He next gives the second needle at both ends a double oscillation, and this stands for the letter O; and a double oscillation of both needles to the right, and at both ends, indicates the letter U. We have thus the letters indicated at both ends, of the word

YOU.

The attendant next repeats one oscillation of the second needle to the right, which gives as at first the letter R. One oscillation of both to the right gives, as formerly, the letter E; one oscillation of the first needle to the right, gives the letter A; all without a new character. Let us now begin with oscillations to the left. Let one oscillation to the left on the first needle stand for D, and a double oscillation to the right being Y, and we have already transmitted the last word of the question,

READY.

The answer may be returned by a double oscillation to the right for Y, a single oscillation on both for E, and a single oscillation to the left, on the second needle, for S. So that you are assured you are understood, and have your reply back over eighty-eight miles in the word

YES.

Thus, by the combination of single oscillations with double and triple oscillations, either singly to the right or left, or simultaneously to the right or left, you get all the characters of the alphabet from a couple of needles. And you do so by the motion only of two handles by the two hands of the operator, which do not require to leave the instrument for an instant. This may be done nearly, if not as rapidly, as common speaking—certainly more rapidly than vocal spelling of the words. This very simple combination is, we believe, Mr. Cooke's.

A second method is by an exquisite little combination of Mr. Wheatstone's. The letters of the alphabet are all engraved round a circular wheel. To speak you only turn each letter round to a fixed point, and the same letter is shown through a small hole to the reader at the other end. This method is most ingenious—to the inexperienced, it seems the easier and simpler—any one, by very slight instruction, can thus talk confidentially to his friend at the other end, without the presence of a third party; but the mechanism is too complicated to be understood by a description without mechanical illustration.

We have thus endeavoured to impart to our readers some of the impressions which a visit to the Telegraph has made on ourselves. We think they will understand as much of its nature as to convey to them a sense of the great value of the invention, and the important influence it may exercise. Railways are messengers of civilization, peaceful links tending to bind countries in ties of closer intercourse; as guarantees of peace, they protect from war; the Electric Telegraph will accompany them. They are now covering the Continent—extending across the Desert—about to span India from Calcutta to Bombay. Where will they stop? There is a railway now on its way from Petersburgh towards Moscow; will it stop there? the direction of that line if prolonged, leads to China. Between Petersburgh and Pekin there is scarcely a hill; Moscow is, therefore, but a first-class station on the way to Pekin. We will not speculate on the date of the completion of such a line just yet, but return to what is imminent and in sight. From London to Southampton there is now an electric telegraph. Mr. Wheatstone is on his way to Paris, for the arrangement of a telegraph in France. It may soon be completed from Havre to Paris; from Paris to Marseilles there will be a continuous line of railway, and a telegraph on it; thus we reach the Mediterranean; thence Egypt, across the Desert, and so to Bombay and Calcutta. We may cross to Belgium, where an electric telegraph already exists. We shall soon have one continuous line to Venice; then across the Desert, and finally

from Calcutta to Bombay as before. Does such a prospect, so clear, so certain of bringing so near home our many friends and brothers now in the other hemisphere, not bring home to our hearts the conviction that we are just entering a career of social improvement, based on scientific discovery, the beneficial effects of which it is difficult to foretell, but impossible to over-estimate?

The South-Western Telegraph is not yet open to the public, but we hope it soon will be. Our readers will be glad to learn that the authors of the invention are among the few who reap the reward of scientific research in a pecuniary form. Government pay, we believe, 1,500*l.* a-year for this telegraph, which has been erected for their use by the proprietors of the railway, and the inventors of the telegraph conjointly.—*Athenæum.*

On Determining Heights of Mountains.

Sir,—I wish to introduce to the notice of such of your readers as will be interested by it, a very short, simple, and correct method of obtaining the heights of mountains, from the observed angle and known distance, which was kindly given me by Mr. Pentland, Consul General for Bolivia in 1837. I had used the method for a long time before it occurred to me to attempt the investigation of the theory of the rule. Having succeeded, I have appended it for the satisfaction of those who dislike to work in the dark.

Rule:—To the log of the distance in feet, add the constant log 7.617087 This will give the log of a number of seconds, to be added to the observed angle, after it has been corrected for dip and index correction; the tangent of this corrected angle added to the log of the distance, in feet, will give the log of the height, in feet.

Example.—Volcano d'Aconcagua, near Valparaiso, at a distance of 538082 feet, subtended an angle of 1° 55′ 45″. Required its length.

Log 538082 =	5.730848	5.730848
Constant Log =	7.617087	
2228″ Log	3.347935	
0.37.8		
1.55.45		
2.32.53	Tangent	8.648378
		4.379226 Log 23946 feet.

Inverse Rule, viz:—To find the distance, when height and angle of elevation are given.—

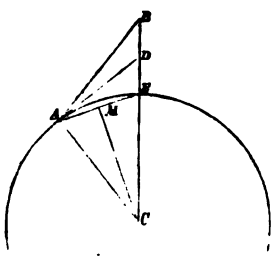
To the log of the estimated distance, in miles, add the constant log 1.400633; the sum will give a log of a number of seconds, which must be added to the observed angle, the log cotangent of which corrected angle, added to the log of the height, in feet, and the constant log 6.216453, will give the log of the distance, in geographical miles.

Example.—The Volcano d'Aconcagua subtended an angle of 1° 55′ 45″, and its height was known to be 23946 feet. Required the distance. The estimated distance being 90 miles.

			° ′ ″		
Log 90 —	1.954243	Ob. ∠	1 55 45	Con. log	6.216453
Con. log —	1.400633		0 37 44	Log Giv. ht. mt.	4.379226
				Log cotan.	11.349917
2264 Log	3 354876		2 33 29		
				Log	1.945596
	37′ 44″		miles 88.27		

The direct rule was copied by Mr. Pentland, if I recollect right, from some French book. The Inverse I have only received lately, from Lieut. Royer, who had it from Capt. Collinson, R.N.

INVESTIGATION OF THE FIRST RULE.



Let C be the centre of the earth, A the observer, BE the hill, AD a tangent to the surface at A; BAD is the observed angle to be corrected for diff. and refraction.

BAE is the whole angle of elevation, DAE is the angle of correction, the amount of which is required.

Draw CM perpendicular to AE. Then since the angles DAC and AMC are right angles; $DAE = 90 - CAM = ACM = \frac{ACE}{2}$.

But since, by the laws of terrestrial refraction, from the observed angle there must be subtracted an angle equal to one-twelfth of the distance the correction will be, $\frac{ACE}{2} - \frac{ACE}{12} = \frac{5\,ACE}{12}$.

$$\text{But ACE in seconds} = \frac{\text{No. of feet in AE}}{\text{feet in Radius} \times \text{Sin } 1''}.$$

$$\therefore \angle \text{ of Correction} = \frac{5}{12} \frac{\text{No. of feet in AE}}{\text{feet in Radius} \times \text{Sin } 1''}.$$

Log of $\angle$ of corr. = Log 5—Log 12 + Log of feet in AE—Log of feet in Rad.—Log sin. 1″—10.

Log of corr. = 9.619789 + Log of distance + 7.993980; assuming the radius of the earth at 20,914,307 feet.

Log of corr. = Const. Log 7.613769 + Log of distance—10.

This log is not quite the same as that of the rule, but gives a difference in the result of 39 feet only. I attribute the difference to our having used different lengths for the earth's radius.

I am, yours, &c.

A. RYDER.

A CURE FOR VENOMOUS BITES.—When you have space in your paper will you oblige me by inserting the accompanying two cases, the result of the successful application of Ipecacuana to the bites of venomous animals. I beg to offer, as an excuse for sending the communication to you instead of to a Medical Journal, that a newspaper is read by the public at large, whereas a Medical Review is generally confined to the profession. One of my servants while bathing, felt something run into his foot, and on putting his hand into the water to ascertain what it was, received a similar injury on that member, but he succeeded in seizing the animal, which proved to be a fish of about four inches long, armed with two processes of bone, close to the abdominal fin. The natives call the fish *singhee*. I saw the man an hour after the receipt of the wounds; he then complained of severe head-ache, had a hot skin, and general fever; the hand and arm, also the leg and foot, were very much swollen, and excessively painful, the pain shooting upwards; the lids of both eyes were also very much swollen. I mixed the Ipecacuana powder with

water to the consistence of mustard, and applied it to the injured parts; in two minutes the pain had ceased, in an hour the fever left him, and in the course of two days the swelling in all the parts had entirely subsided. I was induced to try the above remedy, from having applied it with invariable success, in several cases in bites of the centipede. I was indebted for this hint to one of your correspondents, some three years ago, who wrote of the success that had invariably attended the application of Ipecacuana to the bites of the centipede.

The second case was that of a palkee-bearer, who was bitten on the right foot by a snake; but owing to its being at night, the animal escaped. When I saw him, sometime after the receipt of the injury, he complained of the leg feeling heavy, and a gnawing pain throughout the whole of the limb; it was cold to the touch, and swollen. The man was suffering from great depression of the vital powers, and prostration of strength. I gave him a table-spoonful of *sal volatile* in a little water; and on examining the foot discovered the two punctures, where the fangs had entered. I scarified the part freely, and put the whole of the foot into hot water, but it did not bleed freely. I therefore applied the cupping glasses to the calf of the leg in two places. In a quarter of an hour, I gave him another table-spoonful of *sal volatile*, still keeping the foot in hot water; the heaviness of the leg was less, but the gnawing sensation continued. Three quarters of an hour after I first saw him, I applied the Ipecacuana paste; in less than five minutes the man told me his foot was quite light, and that the gnawing pain had entirely left it. The man remained in my verandah two hours, and had not any return of pain; he then went to his house in the neighbourhood, and the following day I heard he was free from pain, but that the leg was still swollen. For three days he applied goulard water, and in ten days came and made me a salaam, perfectly well. The scarifications had not quite healed, but the leg was of the natural size.

I am, &c.,

H. J. Thornton,

Sylhet, June 17, 1844.—*Hong-kong Gazette.* *Assist.-Surgeon.*

On a Voyage from Liverpool to London.

March 20, 1845.

Mr. Editor.—I have been an eye-witness of so much carelessness and ignorance of commanders in the merchant service, whilst in the English Channel, that I consider it a duty incumbent upon me to mention an instance which nearly proved fatal to the vessel in which I sailed.

I will thus far give credit to our captain in possessing many excellent qualities, and perfectly understanding the intricate navigation from Liverpool to London; still on some occasions, he had not sufficient judgment to keep aloof from the land. The vessel was a small schooner, a regular trader from Liverpool to London.

The courses and bearings are magnetic.

At noon on the 19th of December last,—

St. Anne's Light-houses, Milford, bearing east, distant 6 miles.

From noon until 8 p.m. allowing for tide, set of the sea, &c.
course made good..... S.S.W. ½ W., dist. 53 miles.

Eight p.m. to 2 a.m. 20th Dec. ditto..... S.W.b.S., dist. 31 miles.

Two a.m. 20th, to 3h. 30m. a.m. ditto ..... W.b.S., dist. 11 miles.

Four p.m. 19th, reefed the fore-top-sail and fore-sail, and stowed small sails.—6 p.m. reefed the main-sail. At 2 a.m., 20th, we were two or three miles to the northward of the Bay of St. Ives. As it was the Master's

watch, he came on deck and ordered the helmsman to keep her away. From noon until midnight there was a fresh breeze from S.E.b.E. About midnight the wind veered to E.b.S. At ½ past 3, a.m., 20th, we were standing ready to gybe ship, when one of the men called out that a rock was *right a-head!* The captain put the helm hard-a-port, and our larboard quarter just swung clear of the rock.

I picture here the gracious interposition of Providence in watching over us during the impending danger. In a few seconds more this mismanagement would have launched us into eternity, and a valuable freight would have been sacrificed.

The rock was the Three Stone Oar, bearing from the Longships, Land's-End, N.E. ¾ E., distance 8 miles. The night was fine and rather hazy, and a heavy sea was running. When close to the rock we were going at the rate of 7 knots an hour.

Taking into consideration the circumstances of the weather, tides, &c., a course of S.W. ½ S. would have taken us, from our bearing at noon on the 19th, two or three miles to the westward of the Longships.

I have not the least hesitation in saying that the deep-sea-lead is much neglected in the Channel. If commanders were more cautious in this respect, a great deal of wear and tear would be avoided, as well as the anxiety which they undoubtedly experience. This was the case with us. We had not a deep-sea lead; on this account, and inattention, the crew narrowly escaped being transmitted into another world.

I sincerely hope that this will afford another proof to your numerous readers, that caution in shaping courses in the Channel, and the use of the deep-sea-lead are indispensable. If seamen would make a point of conveying their experience to your valuable periodical, I rest assured that it would be of infinite benefit to the rising generation afloat. Anxiously desirous that my views will prove of service, and that other sailors will not be unwilling to convey their opinions to your pages.*

I remain, &c.

A. B. Wilson.

[Our correspondent has very properly exposed the incapacity of this commander, and it would be doing the country a service, if such ignorance and unfitness for command, whenever it appeared in our Merchant Service, was served in a similar manner. We should consider it our first duty to assist in its exposure, with a view to its conviction. Had the wind been from the westward, instead of the eastward, the vessel would have been numbered with our wrecks, many of which may occur from similar ignorance, combined with neglect of compass and lead.—Ed. N.M.]

* Our pages are always open to them.—Ed.

Nautical Notices.

Fort St. George, Dec. 13, 1844.

The following letter pointing out an error in the position assigned in the Charts to the Laccadive islands, and the Shoals in their vicinity, is published for general information.

To Captain John Pepper, Acting Superintendent of the Indian Navy.

No. 199 of 1844.

Sir.—I beg to bring to your notice, that in the arrival report of the barque Falcon, on the 8th instant, it is stated that the vessel struck on the

Byramgore Shoal of the Laccadives, when, by her reckoning, her latitude was 12° 1′ north, and longitude 71° 40′ east of Greenwich, and recently another vessel, the Ceylon, bound to this port, was wrecked on the Cherbaniane Bank, when, by her reckoning her latitude was 12° 22′ north, and longitude 71° 51′ east. In the first case, the position of the vessel would appear to the Commander to be 23 miles to the westward of the Shoal, and in the second case 18′ 20″.

My object in addressing you, is to point out, that the dangers of the Laccadives group, are all placed 18 miles of longitude too much easterly on the Chart of the most recent survey, executed by Captain Moresby of the Indian Navy, in 1828, an error which is likely to prove fatal to some ships, passing to the westward of the group on their passage to this port. In justice to Captain Moresby, I would state that the error arises from the longitude of Mangalore flag-staff at the time of the survey, being allowed to be 18′ 18″ to the eastward of the correct position, as determined by the grand trigonometrical operations with reference to the longitude of the Madras Observatory. The first station at the Laccadives was the Cherbaniane bank, and the distance between it and Mangalore flag-staff was determined by Chronometric admeasurement, after which all the other islands and dangers were determined, from the Cherbaniane bank, consequently the relative bearings and distances of each must be correct, but the erroneous longitude east of Greenwich affects the whole.

I would beg to suggest, that notice be given to Ship Masters (who may be navigating by that chart) of the necessity of deducting 18½ miles of longitude from the positions assigned to the Banks and Islands of the Laccadives, to obtain their correct positions.

I have, &c.

(Signed) Dan. Ross, *Master Attendant.*

Master Attendant's Office, *Bombay*, *Nov.* 11, 1844.

Published by order of the Most Noble the Governor in Council.

J. F. Thomas, *Acting Chief Secretary.*

Hydrographic Office, *March* 4, 1845.

Lights in the Strait of Bonifacio.—The Sardinian Government has announced that the following Lights have been established on the South side of the Strait of Bonifacio:—

1. A fixed light on the summit of Razzoli Island at the eastern entrance of the Strait, in lat. 41° 18′ 15″ N. and long 9° 20′ 45″ E. The lighthouse is 72 English feet high; the light stands 269 feet above the level of the sea, and is visible in clear weather at the distance of seven leagues.

2. A Revolving Red Light on Cape della Testa, near the old tower on the north point of Sardinia, at the western entrance of the Strait of Bonifacio. This light revolves every three minutes, and is preceded and followed by short eclipses. It is in latitude 41° 14′ 12″ N. and longitude 9° 9′ 10″ E. The lighthouse is 69 feet high; the light stands 220 feet above the level of the sea, and is visible in clear weather at the distance of five leagues.

Trinity House, *London*, *March* 6, 1845.

Yarmouth Roads.—Notice is hereby given, That with the object of affording some further facility in navigating vessels through the narrow passage called the Cockle Gatway, the Floating Light Vessel therein will be removed about four cables' length in a S.W.b.W. ½ W. direction. This alteration will be carred into effect on or about 10th April next, and at the same time the present White Beacon Buoy at the north end of the Scroby

Sand will be taken away, and a Beacon Buoy, coloured Red, placed in the same situation instead thereof.

Mariners are to observe that the intended change in the position of the Cockle Light Vessel will not occasion any alteration of the courses in approaching her, either from the northward or from the southward.

Notice is hereby further given, that an additional Black buoy has been placed on the Cross Sand, at the N.E. extremity thereof, nearly in line with the two Black buoys previously on that Sand, and about 2¼ miles from the northernmost of them. The buoy lies in 5 fathoms at low water, with the following marks and compass bearings, viz.—

Winterton Light-house in one with the Cockle Light Vessel	N.W. ½ W.
The Chimney of Lacon's Brewery in line with the N.W. side of Yarmouth Old Church Tower	W.b.S. ½ S.
Middle Cross Sand Buoy	S.W.b.S.
Newarp Light Vessel	N.N.E. ¼ E.

This buoy is denominated the "North Cross Sand," and the northernmost of the other buoys is now called the "Middle Cross Sand."

Note.—The usual information in respect of the marks and bearings of the Light Vessel, will be published in due course.

By Order,

J. Herbert, *Secretary.*

New Books.

An Enquiry Relative to Various Important Points of Seamanship. *By Nicholas Tinmouth, Master Attendant of H. M. Dockyard, at Woolwich.*—Masters, 33, Aldersgate Street.—1845.

This little work is one which every seaman who has felt the importance of understanding certain points of his profession, and the difficulty of obtaining sound information upon them, will do well to possess.

The general scope of the book, among other points, is to investigate the *amount of strain* in certain cases, as for example, in hoisting up heavy weights by yards and sheers, the strain of cables, hemp and chain, in certain positions.

Among the most useful and most novel points of the information afforded is, an account of experiments made at Woolwich, in 1842, for testing the strength of hemp and chain cables, and ropes of smaller size. We shall enumerate here a few of the principal conclusions.

"A 25-inch hemp cable contains 8267 yarns; 100 fathoms weighs 13,063 lbs. the greatest breaking strain was 113 tons, the smallest 94 tons. A 15-inch cable, of 1179 yarns; weight of 100 fathoms 4716 lbs., the greatest breaking strain 44 tons, least 34 tons. A 5-inch ditto, 135 yarns; weight of 100 fathoms 540 lbs., greatest breaking strain 5 tons, least 3·7 tons. A 2-inch chain cable, weight of 100 fathoms 21,504 lbs., greatest breaking strain 103 tons, least 96 tons. A 1-inch ditto, weight 5376 lbs., greatest breaking strain 27 tons, least 21 tons. Four-strand rope is weaker than three-strand by 1-5th; the cables are the weakest, and stretch exceedingly on being strained. A cable strained with a certain force, was found on a second trial, to be equal only to half the former effort. It appears that a rope, when heavily strained, stretches and diminishes its section correspondingly, becomes weaker in proportion, and that the fibres take a set, by which the rope cannot recover its elasticity. Hence it is not safe to suffer the strain on a rope or cable to amount to half its utmost power."

The writer then annexing these conclusions to the setting up of rigging, introduces several remarks tending to show that there is no necessity for producing that [illegible] as is too frequently brought on the shrouds especially when [illegible] and the weather follows), both to the destruction of the [illegible] and to the manger (in the case of the main-mast) of forcing the [illegible] In these also the results of very important trials made [illegible] testing the comparative strength of different modes of turning [illegible] from which it results that the old method of throat and [illegible] is much the strongest.

[illegible] on the theory and practice of rigging sheers, diagrams [illegible] illustrating the distribution of the different strain in yards, [illegible] and an inquiry, confirmed by experiment is introduced [illegible] of a much longer scope of chain-cable in a gale, than many [illegible] easily conclude is enough.

We suggest that the author will enhance the utility of this work, in a [illegible] by describing the different steps of the calculations in a more familiar and diffuse style; as they may thus become the means of conveying [illegible] to younger readers that elementary scientific knowledge which is at once [illegible] useful, and not easy of attainment.

The Dispatches and Letters of Vice Admiral Viscount Nelson, [illegible] Notes. — *By Sir Nicholas Harris Nicolas, G.C.M.G.*—The Second Volume. 1795 to 1797.—Colburn, London.

We cannot do better than transcribe a portion of the Editor's Preface to his [illegible] of this volume, which contains the dispatches and letters of Nelson, from the beginning of 1795 to the end of the year 1797.

"They relate principally to Admiral Hotham's actions with the French [illegible] the 13th and 14th of March, and the 13th of July, 1795, to his proceedings when in command of a small squadron on the coast of Genoa, acting [illegible] co-operation with the Austrian General De Vins; to the blockade of Leghorn [illegible] the capture of Porto Ferajo, in July, and of the island of Capraja, in September, 1796; to the evacuation of Corsica; to the action with and capture of a Spanish frigate, in December of that year; to the battle of St. [illegible] the bombardment of Cadiz, and engagement with Spanish gunboats; and to the unsuccessful attack on Santa Cruz; in Tenerife, in July, 1797, when he lost his right arm. Some of the events described [illegible] are the most important and interesting of his life."

We [illegible] that the Editor Sir N. H. Nicolas, pursues his arduous undertaking [illegible] becoming the subject in hand, notwithstanding the difficulties [illegible] in assuming original matter for the correction of Clarke [illegible] has printed some curious documents in [illegible] which will amuse the reader.

[illegible] on Practical Seamanship for the Use of Officers.—*By Arthur* [illegible] R.N. Clerke & Bannister-street, London.

[illegible] with much satisfaction, for we found [illegible] and the diffusion of [illegible] cannot fail to do

[illegible] of the officer carrying [illegible] of a ship and her manage- [illegible] practical hints on rules of [illegible] as well as those for the manage- [illegible] qualifications of a command- [illegible] the school from which he obtained

Were we disposed to be fastidious with any part of his "friendly" advice, it would be in modifying in some degree his arrangement of subjects in the system of instruction which he proposes for each day in the week. We should like to have seen, for instance, some attention to the no less favourite than useful studies of the day, such as geology, botany, conchology, and such subjects which a sailor has ample opportunity for following.

We entirely approve of the castigation which the author has bestowed on the followers of that foppish, as well as pernicious habit of cigar smoking. His remarks on the accessibility of officers to the charts on board, are also deserving attention. We have always been of opinion that an easier access should be had than is generally found on board Her Majesty's ships, to the large supply of charts in every ship, so liberally given by Government, and we do hope this will be established.

Our author was not aware possibly that the barometers as well as charts and Nautical Almanacs, and "Raper's Navigation," are now supplied to all ships; but his remarks are calculated to do much good; and the "Midshipman's Friend," we may assure the young naval officer, if he but follow his advice, will prove a friend indeed.

RULES FOR FINDING THE NAMES AND POSITIONS OF ALL THE STARS OF THE FIRST AND SECOND MAGNITUDE. — *By H. W. Jeans, F.R.A.S.*—Woodward, Portsea.

A useful companion to the young officer's library. Mr. Jeans has illustrated his directions with diagrams, and with the help of the index, no difficulty can be experienced in finding the stars of any of the principal constellations.

THE SHIPMASTER'S GUIDE TO THE BALTIC.—*By the British Vice Consul at Copenhagen.*—W. S. Orr, Paternoster Row.

The British Vice Consul at Copenhagen has set an example, well worthy of imitation by his brother officers in other parts of the world; for as he says, very justly, "a large portion of the complaints which occur, arise out of ignorance of the regulations, and might be obviated by a proper acquaintance with them."

The little work before us extends to about 80 pages, (12mo.), comprising a vast deal of practically useful information, touching the laws and regulations of the ports and seas of the King of Denmark; (why were not those of Russia, Sweden, and Prussia included in this Guide to the Baltic?) giving an account of light coins, weights and measures, rates of pilotage, and such information which cannot fail of being useful to Shipmasters, to whose attention we cordially recommend it.

A TREATISE ON THE STEAM ENGINE.—*By the Artisan Club. Parts 1 to 9.*—Longman, London.

Those who desire to possess the best treatise on the Steam Engine, should not pass by this work. They will find in it every particular of this important machine elaborately treated, every progressive improvement carefully described and illustrated by plates; together with extensive tables for abbreviating calculations; all contributing to form the most valuable practical work on the steam engine yet produced.

New Charts.

Published by the Admiralty, and Sold by R. B. Bate, 21, Poultry.

Vavau Harbour.—*Friendly Islands, Pacific.—By Capt. C. R. Bethune, R.N.* 1838. Price 9d.

The English Channel. *The coast of England and Ireland, from various surveys. The Sounding, by Capt. M. White, R.N. The Coast of France from the Pilote Francais—By M. Beautemps Beaupre.* Price 2s.

Supplementary Sheet to the Chart of the English Channel, *shewing the Outer Soundings.* Price 1s.

West Coast of Africa.—*Sheet* 3, *Santa Cruz to Cape Bojador.—By Lieut. Arlett, R.N.*, 1835. Price 2s.

River Tay.—*From the Entrance to Dundee, with Continuation on a Reduced Scale.—By Com. Slater, R.N.*, 1833, *corrected to September* 1844. Pr. 3s.

Bass Strait, *Australia, with* 11 *Plates.—By Com. Stokes, R.N.*, 1843. Pr. 2s.

English Channel, *East of Beachy Head.—By Capt. M. White, R.N.*, 1824. *The French Coast inserted from the Pilote Francais*, 1843. Pr. 2s.

Harbour and City of Havana,—*By Capt. Don Joseph del Rio, Spanish Navy*, 1798. *The Meridian and Scale corrected by Com. Barnet, R.N.*, 1844. Price 2s.

Ship Channel, *Bahamas, with View.—By Com. R. Owen, R.N.* 1835. Pr. 9d.

Sighajik Harbour, *with Views.—By Lieut. Graves, R.N.*, 1837. Price 1s.

Gallinas, *Monrovia, Junk River, Edina and Grand Bassa, Cestos, Sangwin River, Sinou.—By Capt. A. T. E. Vidal, R.N.*, 1837–9. Price 2s.

Monthly Record of Naval Movements.

Actæon, 26, Capt. G. Mansell, Feb. 24, left Plymouth for Africa; *Alfred* 50, Com. Purvis, Jan. 16, at Rio; *Amazon*, Capt. J. Stopford, March 12, arr. at Malta.

Belvidera, Lieut. Ward, Feb. 24, arr. at Portsmouth, 5th paid off.

Comus, 28, Com. T. S. Thompson, Feb. 23, arr. at Portsmouth, from Chatham, 27th arr. at Plymouth, 11th sailed for Brazils; *Cambrian*, 36, Commodore Chads, Dec. 23, arr. from Madras at Singapore; *Canopus*, 84, commissioned March 2, by Capt. F. Moresby, at Plymouth; *Carysfort*, 26, Capt. Right Hon. Lord G. Paulet, Dec. 8, at Mazatlan.

Daphne, 20, Capt. Onslow, Nov. 17, at Arica; *Devastation*, 6, st. v. Com. W. H. Kitchen, Feb. 11, at Malta.

Eagle, 50, Commander Provost, Feb. 18, left Sheerness for Portsmouth, Feb. 20, arr. at Spithead, March 24, sailed for Rio, with the flag of Rear Adm. Inglefield; *Electra*, 18, Com. Darnley, Feb. 4, arr. Port Royal from Bermuda; *Erebus*, March 4, commissioned at Woolwich, by Capt. Sir John Franklin, for the N.W. expedition; *Espoir*, 10, Dec. 8, off the Congo.

Fantome, 16, Com. Sir F. Nicholson, arr. Feb. 23, at Portsmouth, from Sheerness, March 5, sailed for Mediterranean; *Firebrand*, st. v., Capt. G. Hope, Feb. 24, sailed for South America, with Mr. Gore Ouseley; *Fox*, 42, Capt. Sir H. Blackwood, Jan. 8, at Madras; *Formidable*, 84, Capt. Rich, from Gibraltar, sailed for Athens, Jan. 28, arr. at Smyrna.

Grecian, commissioned by Com. A. Montgomery.

Lily, 10, Com. F. Newton, Feb. 14, left Portsmouth for Coast of Africa; *Lizard*, st. v., commissioned by Lieut. J. A. Macdonald, at Woolwich.

Hibernia, 120, commissioned at Portsmouth, March 4, by Capt. Richards; *Hermes*, st. v., Lieut. Com. Carr, Feb. 16, arr. at Bermuda from Port Royal.

Illustrious, 72, Capt. Erskine, Feb. 8, left Antigua for Trinidad.

Mutine, 12, Com. Crawford, March 1, at Madeira; *Melampus*, 42, commissioned by Capt. J. N. Campbell, at Devonport.

Orestes, 18, Com. E. Cannon, with flag of Adm. Sir E. Owen, Feb. 11, at Malta.

Penelope, st. v., Commodore Jones, Jan. 12, left Gambia; *Pantaloon*, 10, Com. Wilson, Jan. 29, at Tenerife, Feb. 2, sailed for Africa; *Prometheus*, st. v., Com. Hay, Dec. 8, off the Congo; *Pique*, 36, Capt. Hon. M. Stopford, Feb. 6, sailed from Port Royal.

Racehorse, 18, Com. Hay, Feb. 26, left Plymouth for Cork, 28th arr.; *Royalist*, 10, was at Singapore, last from Port Essington on Nov. 19. Three of her commanding officers having died within 12 months, (Lieut. Chetwode, and Act. Lieuts. Kingsley and Wells), and no official communication having been made to the vessel for upwards of a year and a half, the Second Master, Parkinson, was compelled to promote himself to keep the pendant flying. Her masts being both sprung, and her gear in a very delapidated condition, Mr. Parkinson took her without orders to Singapore, where by the last account he was awaiting a reply from Rear-Admiral Sir T. Cochrane, the Commander-in-Chief, to some despatches sent to that officer explaining the woeful condition and distress of the vessel. The garrison of Port Essington are anxiously looking out for a relief, having been in their present quarters six years. Lieut. Graham Ogle was at Hong-Kong awaiting the arrival of the *Royalist*, to take the command.—*Rolla*, 10, Com. Simpson, March 17, sailed for the coast of Africa; *Rose*, 18, Com. Pelley, Feb. 8, left Antigua for Trinidad.

Styx, st. v., Com. Hornby, Feb. 26, arr. at Portsmouth, March 3, sailed for Mediterranean; *Star*, 16. Com. Dunlop, Dec. 10, arr. Ascension; *Spiteful*, st. v., Com. Maitland, arr. at Calcutta, from Colombo; *Scout*, Com. Drummond, Feb. 5, at Gibraltar; *Spartan*, 26, Capt. H. Elliott, Jan. 19, arr. at Port Royal; *Snake*, Com. Hon. W. B. Devereux, Feb. 6, arr. at Malta from Naples, March 8, arr. at Barcelona; *Shearwater*, Com. Robinson, March 10, left Plymouth for West Coast of Scotland; *Scylla*, 16, Com. Sharpe, Feb. 6, left Port Royal.

Terror, commissioned at Woolwich, March 4, by Capt. Crozier, for N.W. expedition; *Thunderbolt*, st. v., Com. C. N. Broke, Dec. 25, arr. Ichaboe, from Cape; *Thalia*, 42, Capt. Hope, Dec. 8, at Mazatlan.

Vulture, st. v., commissioned by Capt. McDougal; *Viper*, Lieut. Com. Carter, Jan. 16, at Rio; *Vindictive*, 50, Capt. Sir C. Sullivan, sailed from Portsmouth March 29, with flag of Vice-Admiral Sir F. Austin, for Bermuda.

Warspite, 50, Capt. P. B. P. Wallis, Jan. 29, at Smyrna.

SHIPS IN PORT.—*Eagle* at Spithead, *St. Vincent*, *Victory*, *Hibernia*, *Rodney*, *Excellent*, *Victoria and Albert* yacht, *Nautilus*, *Comet*, *Hecate*, *Fearless*.

IN HARBOUR.—*Ocean*, *Raven*, *Speedy*, and *African* steamer.

MALTA, March 15.—The Mediterranean Station.—Malta Harbour.—*Formidable*, 84: *Ceylon*, 6; *Amazon*, 42; *Beacon*, st. v., *Bonetta*, *Devastation*, *Hecla*, *Polyphemus*, *Sydenham*, *Medea*, *Styx*.

GIBRALTAR.—*Scout*, *Flamer*.—PIRÆUS.—*Tyne*, 26; *Geyser*.—CORFU *Orestes*, 19.—SMYRNA. *L'Aigle*, 24.—CONSTANTINOPLE.—*Virago*.

EN ROUTE.—To Malta, *Acheron*, from the Ionian Islands; and *Locust*, from Marseilles. To Candia, *Volcano*. To Barcelona, *Snake*, 16. To Beyrout, *Warspite*.

Royal Harwich Yacht Club.

This Club was founded in the autumn of 1843, in which year its first regatta was also held. The second regatta was not only noticed at length, but illustrated by three sketches in the *Pictorial Times* of September 28th 1844; and if the sports of 1845 but equal those that have already taken place in the port, the Harwich Yacht Club cannot but deserve every success. Mr. Miall the present Secretary, who is also Lloyd's agent at Harwich, has been indefatigable in his endeavours to advance the interests of this new Aquatic fraternity, which we are glad to find is now increasing in numbers and taking firm root. It will be borne in mind that no other Club is yet* in existence on the *east* coast of England except the Royal Eastern Yacht Club, in the Frith of Forth, which we noticed in our last number, p. 154.

The following will show the contests at Harwich in 1843 and 1844.

Regatta in 1843.

Silver Cup won by *Blue-Bell*, beating the *Enigma*.

Silver Cup won by *Exquisite* beating *Rival*.

Third Race won by *Providence* beating *Elize*, *Mystery*, *Foam*, *Rival*, *Nautilus*, *and Albatross*.

Several other sailing-matches came off; as well as rowing matches, and "last not least" a punt or "duck hunt."

Regatta in 1844.

Silver Cup won by *Enigma*, beating *Wasp* and *Curlew*.

Silver Cup won by *Phantom* (R.W.Y.C.) beating *Foam* and *Crisis*.

Silver Cup won by *Ariel*, beating *Syren*, *Fairy*, *North Star*, and *Rival*.

Three races also took place between smacks and sprit-sail barges for money prizes; together with five or six spirited rowing-matches.

The entrance-fee to the Harwich Club is two guineas, and the annual subscription one guinea. The list of yachts and members for 1845 is preparing for publication.

In the *Nautical Magazine* for 1844, pp. 81, 212, 715, we have inserted *Sailing Directions* for Harwich Harbour; shown that it has given shelter to 500 shipping at once; and pointed out the advantages of a Harwich *Breakwater*, and a *Pier*, to which the Proprietors of the Eastern Counties Railroad have pledged themselves to contribute. Circumstances, altogether, seem very much to favour the hopes of success which the Harwich Yacht Club entertain.

* There is some talk of forming a new Yacht Club at Hull, to be called "The Royal Yorkshire Yacht Club."

Promotions and Appointments.

(From the Naval and Military Gazette.)

St James's Palace, Mar. 5th, 1845.—The Queen was this day pleased to confer the honour of Knighthood upon Captain John Hamilton, late of Her Majesty's Packet Service.

Promotions.

Captains—Hon. F. Hastings.

Commanders—J. H. Bowker—H. Chads—R. A. Stewart—H. J. Douglas

Retired Commanders—J. W. Bailey W. Kendall, T. Smith, W. Lugg, R. L. Connolly, J. Gregory, (Mate of Success, and in command of one of her boats in the severe contest in cutting out a Spanish polacca of 10 guns and 113 men, and present in the same ship at the capture of the French liner Genereaux and Diana frigate)—J. Finlayson (served in the boats of the Hydra in 1807, at the capture of three armed vessels in the port of Begu)—H. F. Belson, W. J. Innes—H. J. P. P. (Mate of Namur in Strachn's action, and present at the capture of Dinois's squadron—C. Chappell (Midshipman of Victory at Trafalgar.)

Lieutenant—S. H. Picard.

Masters—E. H. Garwood, S. Johns, J. S. Hill, C. George. B Renaud.

Deputy Inspector of Hospitals—D. King, M.D., for services at China.

SURGEON—S. S. Stanley to take seniority from 11th June, 1842.

ASSISTANT SURGEON—H. W. Horsell.

APPOINTMENTS.

REAR ADMIRAL—S. H. Inglefield, CB., to be Commander-in-Chief at the Brazils *v.* Commander Purvis.

VICE ADMIRAL—Sir W. Parker, Bt. GCB., to be Commander-in-Chief in the Mediterranean.

CAPTAINS—Sir John Franklin, KCH., to *Erebus*, and to have the command of the Arctic Expedition—F. R. M. Crozier (1842) to *Terror*—Hon. G. Hastings (1845) to study at the Naval College—N. Campbell, C B., (1827) to *Melampus*—F. Moresby (1841) to *Canopus*—W. B. Dobson)1841) to study at the Steam Factory, Woolwich—P. Richards, CB., (1828) to *Hibernia*.

COMMANDERS—J. C. Provost (1844) to *Eagle*—A. L Montgomery (1838) to *Grecian*—J. B. Marsh (1844) to *Canopus*—W. S. Cooper (1843) to *Rodney*—C. Wise (1842) to *Hibernia*—J. FitzJames (1842) for the purpose of making observations on the variations of the needle is appointed to be Commander in Sir J. Franklin's ship—J. W. Noble to *Vindictive*—W. Radcliffe (1830) to *Apollo*—T. R. Sulivan (1840) to study at Naval College—J. A. Gordon (1842) to *Wolf*.

LIEUTENANTS.—A. Webb (1815) T. Freer (1821) to be Mail agents—C. E. Wilmot W. Wilson (1841) to *Lily*—C. D O'Brien (1840) to *Ranger*—H. De Lisle (1844) to *Frolic*—C. Seaver (1830) T. B. Stewart (1842) to *Racehorse*—C. D. Denet (1844) to *Acorn*—S. H. Pickard (1843) H. Bernard (1841) A. J. Burton (1842) to *Vindictive*—Hon. G. H. Douglas (1844) J Borlase (1841) H. Julian (1840) F. J. Diggens (1842) G. Cleaveland (1842) to *Hibernia*—G. Gore (1837) J. W. Fairholme (1842) H. T. D. Le Vesconte (1841) to *Erebus*—R. Coote (1843) W. S. Sanders (1841) W. Austin (1838) to *Vulture*.—W. Mould (1842), E. B. Nott, (1829), D. Reid, 1840), R. W. Alcock, (1844), C. Moore, (1841) to *Canopus*—A. Cumming, (1840) to *Caledonia*—V. Baker, (1839) to *Espeigle*—W. L. Partridge (1844) to *Grecian*—J. Irving, (1843) to *Terror*—E. Little, (1837), G. H. Hodgson (1842), S. J. Brickwell (1841) to *Amazon*—J. Stone (1800) to open a rendezvous at Blackwall and Ratcliff highway, for entry of seamen—E. H. Gunnell (1841), E. A. Inglefield (1842) to *Eagle*—W. T. Griffiths (1825) A Royer (1841), A. P. Ryder (1841), to study at Naval College.

MATES—M. O'Reilly to *Comus*—A. Phillimore, C. J. Jackson, S. Douglas to *Hibernia*—E. Hore to *Vindictive*—F. G. Partridge, R. Molesworth to *Excellent*—J. Crawley to *Canopus*—A. Douglas to *Superb*—C. F. Des Vœux to *Erebus*—T. Hornby to *Terror*—H. G. Williams to *Fantome*—G. Wale to *Cyclops*—J. E. Parish, H. West, T. Brandreth to study at Naval College—N. Sullivan to *Ranger*.

SECOND MASTERS—R. White to *Rodney*—J. Piper to *Canopus*—G. Green to *Hibernia*—G. Allen to *Herald*—F. Macdonald to *Spy*—A. Elliot to *Victory*—F. J. Kent to *Apollo*—H. Collins to *Erebus*—R. Batt to *Hibernia*—W. Greet to *Albion*—A. Buist to *Lynx*—W. Betts to *Crescent*—J. Wills to *Vindictive*—J. Mathews to *Caledonia*.

MIDSHIPMEN—R. Bradshawe, C. J. Stockdale, to *Rodney*—G. C. Lloyd, R. Hallowes, C. Kent to *Excellent*—F. A. Herbert, W. White, H. Bloomfield, W. Bowden, T. Jones, H. Wright to *Hibernia*—J. Maitland to *Vindictive*—J. Lloyd to *Locust*.

NAVAL CADETS—C. Dent, H. Jones, C. Stevens, C. Perceval to *Rodney*—J. James, H. Sullivan, C. Campb ll to *Vindictive*—C, Armytage, E. Wilmot to *Hibernia*—F. Hammond to *Pandora*.

SURGEONS—W. Bruce, MD., to Deptford dockyard—A. Kilroy superintendent to *China* convict ship—C. Browning superintendent convict ship *Theresa*, J. Sloan to *Tory* convict ship—G. Pritchett to *Vulture*—A. Anderson to *Rolla*—T. W. M'Donald to *Hibernia*—W. Rogers to *Canopus*—R. W. Clarke to *Grecian*—S. Stanley to *Erebus*.

ASSISTANT SURGEONS—J. S. Peddie, A. Macdonald to *Terror*—J. Martin to *Ceylon*—T. Kincaid to Greenwich Hospital R. Grigor to *Hibernia*—S. Wells to *Vindictive*—N. Lyttleton to *Express*—J. Christie to Haslar Hospital—J. Harvey to Royal Hospital, Stonehouse—W. D. Kerr and T. Miller to *Canopus*.

CHAPLAINS—J. Cooper to *Rodney*—R. B. Howe to *Eagle*.

NAVAL INSTRUCTOR—J. D. Kennedy to *Vindictive*.

PAYMASTERS and PURSERS—G. Dowel re-appointed to *Apollo*—B. Chimmo to be Secretary to Vice Admiral Parker.

CLERKS—W. Mugford to *Hibernia*—M. Crouch to *Vindictive*.

COAST GUARD—*Appointments*—Lieut. Coles to command Fleet station—Lieut. Barker from *Ranger*.

Removals—Com. Jerningham to North Yarmouth—Lieut. Brown to Lulworth—Lieut. Hennah to Hastings.

THE ARCTIC NAVIGATORS.—We understand that the Naval Officers who have recommenced the various expeditions within the Arctic and Antarctic circle, have lately presented an elegant piece of plate to Sir John Barrow, a testimony of their respect for him as the great patron of their discoveries [illegible].

BIRTHS, MARRIAGES, DEATHS.

Births

[illegible]

Marriages

[illegible]

Charlotte, eldest daughter of the late Rev Dr James Carne, incumbent of Charles Church Plymouth.

March 4th, Lieut. H. Bainbridge, R.N. to Mary Anne, daughter of Lieut.-Colonel Harvey, R.M.

Deaths

January at Walmer Capt. John Baker, R.N. [illegible], of Upper Deal Street Kent, aged 75.

March 4th at Portsmouth, Commander B. F. Vesi, of H.M.S. Pembroke.

METEOROLOGICAL REGISTER.

[illegible] by Mr. V. Lawson, at the Royal Observatory.

[illegible] from the 24th March 1845.

	Thermometer		Wind			Weather	
			Quarter		Strength		
			A.M.	P.M.	A.M. P.M.	A.M.	P.M.

Remarks on the Entrance to the Eastern Channel of Port Royal.—*By G. Biddlecombe, Master, R.N.*—1844.

On entering the Eastern Channel with a fair wind, which generally occurs daily, you should bring the flag-staff at the Apostle's Battery, on with the flag-staff of Fort Charles, at Port Royal, bearing W.b.N. by the time you have the White Beacon on the Palisadoes in line with Kingston church, bearing N.b.W. Keep the former marks on, and you will run up to Port Royal Point, sounding from 17 to 11 fathoms, and you can pass the Point within 30 fathoms.

Or, when abreast of Lime Kay, steer towards Rackham Kay, till the flag-staff at Port Henderson is on with Port Royal Point, N.W.b.W.$\frac{1}{2}$W., which is the leading mark through between Rackham and Gun Kays, and up to Port Royal Point, passing inside the Knoll of 20 feet, which has a black and white buoy on it. Having passed the Point, keep the north extreme of Lime Kay, touching Port Royal Point, until the Commercial flag-staff and the Hospital flag-staff at Port Royal are in line with each other, bearing N.E.$\frac{1}{2}$E., when you will be clear of the Harbour Shoal of 17 feet, which has a red and white pile driven into it near its centre; the Admiral's Pen, which is a large white building inland, open of Gallows Point, bearing N.E.$\frac{1}{2}$N., clears you of Port Royal Shoal, at the extremity of which is a white buoy, in 11 feet water, with 7 fathoms a little to the westward of it.

Having passed the white buoy you are within the anchorage generally used by men-of-war, which is in about 9 fathoms in a N.W. direction from the dock-yard; but merchant vessels generally anchor abreast the Naval Hospital to the southward of the white buoy of Old Port Royal Shoal; it being easier to get out with the land-wind, and also to avoid fouling the Queen's Moorings. In the event of not procuring a pilot (which you will generally get off the Morant lighthouse, or Yallah's Point,) a stranger cannot do wrong in the day-time, by running along the Palisadoes at half-a-mile distance, taking care not to go under 13 fathoms; and, if in doubt as to the marks before described, anchor in 16 or 17 fathoms, with Lime Kay S.E.b.S.; but do not attempt to enter the Channel at night without previous knowledge of it, as the Palisadoes are very low, and steep to, besides the shoals off Great and Little Plumb Points are very irregular, extending more than a quarter of a mile from Great Plumb Point to the S.S.W.

Turning out of the Eastern Channel.—The land-wind will generally allow you to get out of the Eastern Channel before the sea-breeze sets in, which channel is certainly to be preferred for vessels bound to the eastward, as they avoid the strong south-west current, which is always more or less setting along the southern part of the reefs; but, in the event of losing the wind after passing Gun Kay, and the sea-breeze setting in, you may stand towards the Palisadoes, until the flag-staff of the Apostle's Battery is in a line with Port Royal church belfry W.$\frac{1}{2}$N., or into 12 fathoms, until you are near Rocky Point, when you should keep a little more to the southward, as that line just takes you outside the extremity of the reefs of rock extending from Rocky Point.

After passing Rocky Point, you may continue the same turning marks, until you are near midway between Middle and Little Plumb Points; then you must not bring the flag-staff of the Apostle's Battery to the northward of the north part of Fort Charles, which will clear you of the shoal off Little Plumb Point, and when Kingston church comes in line with the beacon on the Palisadoes, bearing N.b.W., you should not stand to the northward more than the line of the leading mark, which is the flag-staff of the Apostle's Battery in line with the flag-staff at Fort Charles which avoids the irregular shoal off Great Plumb Point.

Having passed Gun Kay, you may stand to the southward until the flag-staff at Port Henderson is touching Port Royal Point, bearing N.W. b.W.$\frac{1}{2}$W, to avoid coming near the Lime Kay shoal of 6 feet, which lies to the westward of Lime Kay; when abreast of that Kay you may stand towards it to a distance of two cables' lengths in 16 fathoms water; the shoal extends out from the Kay in a northerly direction, near 100 fathoms, with 3 fathoms on its extremity, when it immediately falls into deep water. Having passed Lime Kay, the high Bluff Point at the north part of Green Bay kept open of the north part of Lime Kay will clear you of the reefs extending to the northward from the Maiden Rock, least water 6 fathoms; the shoalest water, is in the direction from the Maiden Rock beacon, towards the beacon on the Palisadoes. After passing the Maiden Rock beacon, the mark for keeping to the northward of the east middle shoal is the high rising cliffs at the south part of Green Bay kept open to the northward of Lime Kay, and when the beacon on the Palisadoes is in a line with Kingston church, N.b.W., you are to the eastward of the shoals.

Buoys and Beacons on the North Side of the Eastern Channel.—A white beacon is erected on the Palisadoes, the top of which is 60 feet above the horizon, situated about 400 yards eastward of Little Plumb Point, and when in line with Kingston church steeple, bearing at N.b.W., is the mark for being eastward of the east middle shoals.

Buoys and Beacons on the South Side of the Eastern Channel.—East middle buoy, mounted with a staff and vane, 18 feet above the horizon, lies in 7$\frac{1}{2}$ fathoms, rocky bottom, off the N.E. edge of the east middle shoals, with the following marks, viz.: the spire of Kingston church in line with the beacon at the Palisadoes, N.b.W. and the Maiden (sandy) Kay in line with Helshire Hummock, W.b.S.

The Maiden Rock beacon, black, with a vane at its summit, 30 feet above the horizon, placed on the northern part of the rock, which is about 50 fathoms in the east and west direction, and about 25 fathoms in the north and south direction, above water, and the shoal extends to the north-east, into the Eastern Channel about 100 fathoms; but in the direction of Lime Kay, it extends nearly two-thirds the distance, with rocks occasionally above water, with a small channel, about 300 yards broad (of from 10 to 15 fathoms water) between it and the reef extending S.E. of Lime Kay.

The Rackum Kay buoy, black, on the north extreme of the reef, extending from the Kay in 21 feet water, with 5 fathoms close to the north of it.

A black and white buoy is placed in 20 feet water on the Knoll off

Port Royal Point; it lies 70 fathoms from the point; vessels may pass 40 yards on either side of the buoy, in from 7 to 9 fathoms.

Shoals and Kays in the Eastern Channel.—The first that present themselves in this Channel are the east middle shoals, lying S.S.W. from Plumb Point, about one mile and a quarter; they are divided into two shoals with a small channel between them of 14 fathoms water, with 11 feet on the easternmost, and 8 feet on the westernmost, both coral reefs, and very steep to, with the sea frequently breaking over them, when the sea-breeze sets in; a black buoy is placed to the N.E. of the shoals before described.

The first kays to be passed is the Maiden Kay rock, (barren), which is readily distinguished by the black beacon on it, as before described.

The next kay, at the distance of three-quarters of a mile, is Lime Kay, the principal part of which is covered with trees; its northern side is rocky, and the southern sandy, surrounded by a reef, and extending in a N.W. direction near 150 fathoms.

To the westward of Lime Kay one-third of a mile distance, is Lime Kay rocky shoal, with 6 feet water in some parts, and a passage of 10 to 16 fathoms between it and Lime Kay, where a good anchorage of sand and mud may be had, if necessary, for a quarantine ground; with the north part of Lime Kay, E.b.S., and the Maiden sandy Kay, S.E., quite protected from the sea breezes by Lime Kay and the shoals adjacent to Maiden Kay, and from S.W. winds by Lime Kay shoal, which extends itself in a N.W. and S.E. direction near half-a-mile, and then you are prepared to run into Port Royal through the Eastern Channel, in the event of bad weather.

Rackham Kay is very low, with a ridge of rocks extending from it to the northward, and a contiguous reef, on the northern extremity of which the black buoy is placed, as before described.

Gun Kay is low, with a quantity of bushes upon it, surrounded by a reef; the mark for being clear to the northward of the reef is the flag-staff of the Apostle's Battery on with or open a little to the northward of the flag-staff of Fort Charles; and for being clear to the southward, the flag-staff of Port Henderson in line with Port Royal Point, which is the leading mark, through which passage you have 10 to 16 fathoms.

The knoll off Port Royal Point is about 70 fathoms from the shore, with 20 feet water, a black and white buoy is placed upon it, before described; outside of it is a coral bank of 14 feet, with a white pile mounted with a red triangle, 110 fathoms from the shore, as before described.

Note.—In the Eastern Channel the bottom is generally formed of mud and sand, except just to the eastward of Gun Kay, where it is more of mud than sand. Inside Port Royal harbour it is mud with a little sand all over, except where you get near the shoals, when you have portions of broken coral and sand.

[Directions for the Southern Channel, and Remarks on the Currents in our next.]

The Merchant Service.

(Continued from page 200.)

Chapter the Third.

Describes the Situation of the Petty Officers, viz.,—the Second Mate, Boatswain, and Carpenter, and their Present Manner of Living—generally forward among the men, and its Injurious Consequences.

The Second Mate is a person, in whom great charge of the ship and her property is vested, and who, in virtue of his situation, ought to be looked up to by the crew and esteemed by his Captain. In case his Captain dies at sea from want of proper medical advice, or is washed overboard, &c., &c., he becomes Chief Mate as a matter of course, as also, supposing the previous Chief Mate dies. Therefore, whilst he does his duty, he ought to be treated as an officer, and not like a foremast man, which last is too often the case.

In very many ships the Second Mate lives in the forecastle, eating, drinking, and associating with the sailors, who one and all feel him to be just one of themselves, and obey his orders as a matter of choice rather than necessity, and that only as long as they happen to meet their own ideas of propriety. Yet this officer is left in the sole command of the ship four hours one night, and eight the next, and often under circumstances where any neglect of his orders, or even a dilatory, mode of executing them, would ensure loss of spars, and often great danger. Yet, if he lives "hale fellow, and well met," with all hands forward, he cannot enforce commands as he ought, which are often at variance with the good will of the men; and he too well knows that a complaint to the Captain would make his life below worse than purgatory to him, living as he is made to do with all hands forward.

In many ships this officer is never expected or requested to take a meridian altitude or any other observation, and is too often subjected to a kind of subdued ridicule of either himself or quadrant, when he does by stealth, as it were, exhibit himself upon deck for the purpose of learning *as a man*, what ought to have been taught him as an apprentice. He gets no aid from his Captain to clear up his entangled ideas [illegible]vigation, and he is not allowed one moment's peace in the fore[illegible] in which he can collect together any of the little knowledge he [illegible]mand, as to the theoretical part of his calling.

[illegible]stem, so radically bad, and subversive as it plainly is of all [illegible]n, and the necessary respect, which proper attention to the [illegible]appearances would call forth, is allowed to go on, until [illegible]of Mate is open to him, and he emerges from the fore[illegible]"e an inmate of the cabin, too often upon sufferance, so [illegible]manifest to him that he wishes himself back to his free [illegible] again. And the inevitable results of his former con[illegible]' are,—that he either remains the shipmate and not [illegible]ng freedom from the men, wholly incompatible with [illegible]n; or he feels obliged to check all previous familiarity,

by the most harsh and severe manner of exacting the discharge of the smallest acts of duty, to the disgust of his former messmates, who are wholly unable to separate the officer from their late companion, and who are consequently on terms of hot water with him for the time they may be thrown together. So that between the want of comfort he feels from being placed at the cabin table, under constant fear of committing some act against good breeding, and the dread of keeping the ship's company under, he has but little peace of mind.

This state of things, so often entails the most serious expenses on Owners, from either waste of ship's stores, or a desertion of their crews, that whatever trifles they may flatter themselves they gain by the freight of that portion of the cargo, stowed where the berth of the Second Mate, Carpenter, and Boatswain *ought to live*, is, in nine cases out of ten, quadrupled, by acts of waste and embezzlement, over which they can have no control, or even know the amount of, except through the medium of heavy inventories of stores required, producing fruitless enquiries as to wasteful expenditure and general dissatisfaction.

In point of fact, you cannot get a man to either properly respect himself, or cherish a wish to protect your interests, unless he is in some way made sensible (otherwise than by the ship's articles) that you have confidence in his respectability of intentions to serve you. This can only be accomplished by making him feel that by a forfeiture of his duties, he not only sustains loss of comfort and pay, but that he falls morally, and thoroughly loses caste. In short, if Second Mates are to become Chief Mates, and ultimately Captains, that part of their education conducted under the auspices of forecastle ascendancy, can in no way embellish their after-life or habits, and has too often a tendency to make the sea-faring man as a master not only rough in manners, but callous to all those better feelings engendered by blending and associating with respectable society. And, although many of these persons are truly good and able seamen, they daily feel their want of common good breeding to be a drawback on all great advances in their calling, and amply repay on Jack the privations and hardships they suffered in his company.

This case refers, although in a less degree, both to Carpenter and Boatswain, who *ought not* to live and mess with the crew of any ship.

Chapter the Fourth.

Relates chiefly to Chief Mates.

To speak of, or attempt to dictate rules to Masters of ships as to how they ought to comport themselves, either off or on duty, to good, willing, and respectable chief officers, is what I fear lawyers would call, *rather* sharp practice,—or, in other words, taking great liberties. But, as I never descend to individualities, and wish no man to fancy or believe I am talking at him, instead of simply setting forth and deploring a grievance generally, I shall proceed, with all due respect to the parties concerned, to lay before my readers some of the errors attached to the

present relative positions of Master and Mate, and what I consider the way to amend them. And I must begin by avowing my firm conviction that the greatest evils arise against the social systems of many ships, from the want of all kind of cordiality of manner and feeling exhibited towards their Mates by their Commanders.

A Chief Mate either is or ought to be, fully competent to take the command of the ship he serves in; his former respectability of character is the very best and most ample guarantee, that he is worthy of his present berth, as far as moral rectitude of conduct goes; and the very onerous and arduous duties he performs to the letter of his orders, prove both his will and his ability to do his duty, often too in dock, under many unforeseen difficulties and drawbacks to its completion. And, yet I am sorry to confess, I know many really respectable and gentlemanly Captains, who would as soon think of, and be seen shaking hands with a black fellow in the West Indies, as to offer *even a gloved* palm to the welcome pressure of their chief officer; although after a tolerably long absence on shore.

This line of conduct has its origin not so much from any want of proper feeling, as from a morbid dread of lessening the barrier of distinction between themselves and their officers; and the fear that any act of condescension or kindness on their part would be taken advantage of by the Mate, in some coarse advance to unwarrantable freedom. A kind and open avowal of friendly intercourse, and satisfactory conviction of a Mate's having done his duty well, publicly shewn forth, is much more likely to gain his most strenuous efforts in your service, from a strong feeling of regard, than the cold negative credit doled out to him so often and so undeservedly, by barely not finding fault.

This is not the only bad feature in this exclusive system. The men at once detect in the Captain's manner, how far they may or may not be allowed to tamper with the Mate's orders; and wherever marked coldness is shewn on the Master's part, without some palpable breach of good conduct on the Mate's, so sure that the ship gets into a foreign port, and the absence of the Captain affords the opportunity, so sure do the men treat the Mate with their share of that contempt he has received from his Commander, and duty becomes badly done, or wholly neglected. Some Mates, I admit, must be kept at boat-hook's length, being wholly incompetent to appreciate a gentlemanly advance of cordiality from their superior; but, take the aggregate of the Mates of Great Britain, in our Merchant Service, and you will find how few and isolated such cases of defaulters are. And having so taken these said Mates, I will just beg any one to shew me, as a whole, a more responsible, industrious, better conducted, finer, more laborious, or worse remunerated set of men floating on the salt seas.

The wages or hire of a Chief officer in the Merchant Service are exactly on a par with the ship's carpenter, whose position as a petty officer has not one tithe of the responsibility or respectability of the Mate; who, independent of his moral obligations to keep up a really reputable connection and appearance, is forced to lay out the major part of his wages in his tailor's bill at home, and the extravagant charges on his washing abroad, so that he may at least appear, what he is seldom acknowledged to be—a gentleman. My firm opinion is, that it is at all

times worth the trial to conciliate and gain over the friendly feelings of an officer, with whom you are necessarily thrown on all occasions in such immediate contact: more particularly, as in case of sickness. If brought to your beam ends, previous kindness on your part will have won over for you a kind nurse and a warm friend; and your ship and her best interests will be watched over and guarded less as a matter of mere duty than of love. It used to be an old saying, and a very true one,—"One volunteer is worth three pressed men;" and I know by long experience, that duty done *con amore*, never requires overhauling for its defects, or censuring for its insufficiency.

In opposition, however, to this view of treating Mates, it may be urged, and with some truth, that they are a vulgar uneducated set of men, whom it is utterly impossible to exchange ideas with, and with whom no unison of feeling can exist. But in ninety-nine cases out of one hundred this question has not been tried, but begged, and the assertion made and opinion formed on mere supposition alone. What can be expected from a young man, however well educated, brought from the Antipodes of a forecastle, into immediate juxta position with his Captain; from eating off a sea-chest, with a weavelly biscuit for a trencher, to dining at the cabin table. Nothing but extreme awkward shyness, natural enough under the extreme change of circumstances, but too often set down for bullet-headed stupidity. In fact I once fell into this very error myself; for I once had a Mate who was so impenetrably shy, and apparently so narrow and contracted in all his ideas, that I set him down as a veritable fool, and treated him accordingly. And what were my principal reasons for so doing? Two, I very well recollect. One of which was, his very carefully adjusting a new quadrant, and then dropping vinegar into the sockets of the regulating screws, asserting that they would then be too fast ever to get out of place or order. The other was, his having an invincible hatred of the Duke of Welllington, who, he insisted had, when Premier, attempted to pay off the National Debt by discharging the extra hands in the dock-yards, of which unfortunate lot his father was one. We parted, as I remember, mutually dissatisfied, I fancying him a fool, without ever attempting to make him wiser, and he thinking me a proud overbearing man. He is, however, now Captain of a fine ship, and, under better hands, has become an ornament and a credit to his profession.

I am fully aware how much I lay myself open to the imputation of currying favour in a "hale fellow well met" sort of way, by thus taking up the cause of Chief officers with that class of Masters whose daily method of seducing officers and crew to hazard life and limb in their service, is by d——ing the aforesaid limbs to everlasting perdition; and who have so little confidence in their own natural abilities to maintain their proper standing by an even tenour of conduct, that they have recourse not only to the most violent language, but brutal means, for exacting an obedience which their manner of enforcing alone makes repulsive.

It is much to be deplored, as a dark stain in the present annals of our Merchant Service, that lately many cruelties enacted on foremast men, of the most wanton barbarity, have been not only brought to light but proved, and the perpetrators punished by fine or imprisonment. And how well known a fact it is, among sea-faring men, that hundreds

of cases of extreme ill treatment, pausing only on the verge of murder, pass by unknown, but to the few poor fellows who are passive witnesses of it, the victim, and his oppressor. Talk of the severities exercised in the navy in the war time, even in their wildest range, and with some taut hands that range was wide enough, you shall no where find wanton cruelty exercised to such a degree in that service, as we have proofs of it in the other. I object to flogging, always did, even in the old war when our navy was two-thirds supplied with the out-scourings of our jails, and no other means but the *argumentum ad hominem* could avail to keep up subordination with such outcasts. But it is far better to be punished according to naval law, than to be kicked, cuffed, jumped on, rope's-ended, and starved, by a man, who when in five fathoms water owns no control but his own lawless passions. I am very sure that if the votes of the whole mass of Masters of Merchantmen were taken on this head, three-fourths of them would come forward and say,—that any Master proved to have wantonly and cruelly maltreated a foremast man on the high seas, without any just cause, ought not, for the credit of the service, ever to be held worthy of another command in a British bottom.

Chapter the Fifth.

Refers to Masters in the Merchant Service, and contains the Supposed Means of correcting the Errors attached to the Present System of the Service, or rather the total absence of all System. In which will be shewn firstly,—How, and how much it is in the power of Shipowners, Merchants, and Masters, by forming Associations, properly organized, to redress the above abuses, with a saving of expense to themselves, and an immense addition to the moral repectability and comfort of the thousands of sea-faring men employed by them.

I must begin this most arduous task by calling on all my brother sailors as Master Mariners, to look out with as much earnest attention and anxiety on the forthcoming bill for their *cross*-examinations as to capacity for command, as they ever did, when the fearful cry of "breakers a-head" burst on their astounded ears. In making this declaration, I beg most distinctly to say, I do not directly, or indirectly, challenge the good motive of the gentleman who thinks his forthcoming plan for redress of abuses in the Merchant Service the most fit and proper for adoption.

I only beg to disagree with him in opinion, believing him to be in the position of a man about to cast adrift a new coil of rope, and by mistake beginning with the outer, or wrong end, and thereby involving his operations in no end of grinds and round turns, which in attempting to ...ar, will take kinks in the wrong way. In point of fact, the ...nt proposed plan, is to begin, as soon as authorized by law, ... rigid examination of the qualifications of Masters for the proper ...rge of their duties as Master Mariners, disqualifying all such as are ...nversant with even the more abstruse parts of their calling from ... command. I contend that if any radical cure for the inabilities ...sters in the Merchant Service is to be effected, you must begin

with the Apprentices, Third, Second, and Chief Officers, if you ever wish to take the turns out of this piece of twice-laid stuff.

I believe there are few Masters of Merchantmen who will be found hardy enough to deny, but that even after a life spent in the active discharge of the various duties of their calling, they daily find some new feature forcing itself on their notice, in every way novel to pre-conceived notions and habits; and that in fact a seaman may live and die in his profession, and yet be incompetent at all times to meet the sudden changes which unforeseen dangers constantly throw in his way.

Taking this fact into consideration, it becomes a matter of the most vital importance, not only to Masters themselves, but equally so to all Shipowners and Merchants, that pending any serious change of law for the better regulation of the service, the greatest possible care should be taken to strike *at the root* of the evil, and not its topmost branches. I know, Lloyd's know, too well, and Masters themselves know, and will admit, as a body, how many of them are unfit to have charge of a vessel across the Atlantic, and who are often obliged to submit to the feeling uttered by the North-countryman, when blown out of sight of land in the North Sea, who in reply to the cabin-boy, who said, while holding a candle for the Master, during a fruitless overhaul of the chart, "Eh, sur, if they did but ken wor we was at hame,"—"Good lad, if we kenned oursells, I'd ne'er heed a d——n."

All this I freely admit in its fullest extent. Firstly, that there are Masters of foreign-going vessels, who are barely competent to the working of a common day's work, and who do not know how to work up longitude from chronometer or lunar observations, and to whose lamentable want of theoretical knowledge, may be fairly laid the loss of many a good and gallant ship, and consequent forfeiture of life, leaving orphans fatherless, *for whom there is no provision or education*, but who are left to the cold charity of a colder world, to struggle through infancy and boyhood the victims of penury, dishonesty, and ignorance, and in that state come round in their turn to be the very apprentices, who are to be Mates, who are to be Masters, and who are at a *moment's notice* to be disqualified from serving in the only calling they can earn a penny by.

I have now taken the worst bearing of the case in point as regards the inability of Masters, and if in doing so I have unwittingly given offence to any one of them, I most humbly beg his pardon; for too often can this want of navigation be traced to the utter inability in youth, want of time and means as a Mate, to acquire any further knowledge than the bare rudiments of his calling.

The next class of Master, the most numerous, and highly valued and respected set of men are those who make good, quick, and safe voyages to and from the West Indies, America, and various other parts equidistant from England, with the knowledge of working chronometers, *alone*, without the ability to take or work a lunar observation, but who would nevertheless come under the head of the unqualified many, held unfit for command by the regulations of the New Act. This infringement on the prospects of three-fourths of the Masters in the Merchant Service, would be most cruel and unjustifiable, not only as regards the unfairness of the measure, inasmuch as it is well known that lunars

to be at all depended on, must be the result of continued practice, and are only held of high value in long voyages, where in prolonged absence from land to land, you can thereby keep some check on the error and rate of your chronometers. But let me ask, how many of the present Mates of the West Indiamen, Brazilmen, American-going ships, and many others, have ever had either time or opportunity for working lunars on shore or afloat.

The many and very urgent duties of Mates in our service, of a physical kind, so completely occupy their whole time, that when at last one hard day's work is done after another, they have little time or inclination for dry and difficult study, doled out to them by some schoolmaster on shore, whose knowledge of what he teaches, or how to prosecute inquiry is amounts to about the same rate as that of school-boys, as to the rest are either of English or Latin grammar.

All this I think fairly goes to prove that great caution is necessary in forming any court of enquiry as to qualification for command, so as to avoid all possibility of its trampling on the long-sought-for prospects of numberless young men, whose insufficiency in the very higher knowledge of their profession must of necessity find *them* out *in* command, and not before it.

(*To be concluded in our next.*)

Foreign Seamen.

From the Diary of a Seaman.

There are some thousands of Foreign Seamen serving in our Mercantile Marine, who in consequence of the Registry Bill, have been placed in a dilemma. In that Act, certificates are to be given to the subjects of her Majesty, the Queen: consequently the Foreign Seamen could not obtain them. To remedy this an order was issued to the following effect: The party applying for a certificate must take the oath of allegiance—state his occupation—the duration of his residence in the United Kingdom—of which friendly State he is a subject, and whether he intends to continue to reside in the United Kingdom. All to be verified on oath before a Magistrate, and a declaration attached, made and signed by four householders at least, vouching for the respectability and loyalty of the memorialist, and verifying also the several particulars stated in the memorial: expense 2s.

Our Acts of Parliament have never been famed for wisdom; many appear to be framed as if intentionally to create doubts, and to further litigation.

What was the necessity for all the particulars in the concession made to the Foreign Seamen? The whole does no more than offer a premium to falsehood: and in some points seems absurd. If the seaman follows the sea service, how can he intend to reside in the United Kingdom? and who can vouch for his loyalty? Why such minute inquiry? The vouchers will probably be "Crimps," or lodging-house keepers, who for a few shillings would subscribe to anything.

If it were not an injustice to the poor men, many of whom are married to English women, and have made this country their residence, when on shore, for a series of years, as an act of patriotism, we should, perhaps, be justified in excluding them altogether, for this reason,—that, every foreigner employed on board an English ship, stands in the room of a British born subject.

But, as a case of humanity they may be retained, but not cramped with unnecessary provisos. The natives of Norway, Sweden, Denmark, and Holland, are, as seamen, generally steady and useful. As to the Italians, Portuguese, and Spaniards, the less frequent they are found in our ships, the better for the peace of all on board.

During the late war, necessity compelled us to receive any man that offered his service; but, in peace we are choice, and ought to be so. In a nation so essentially maritime, like the British, it seems to be its own fault that it has not at all times an abundance of native seamen.

The precautions which appear to be necessary to be observed with reference to the continuance of Foreign Seamen in our Merchant Service are these: 1.—Oath of allegiance. 2.—Certificate of good character from the last Captain sailed with,—or some other Captain sailed with; and in the absence of either, from the Shipowner, or Merchant, who residing on shore, may be always found. 3.—Name of country where born. 4.—How long employed in the British service. 5.—If married. 6.—Where residing, when on shore. 7.—Age.

I know a Dutch seaman, by name Craggler, whose good conduct deserves to be mentioned. He went out, I believe, as boatswain and sailmaker, in the ship Victoria, to Australia and China. At Hong-Kong the crew deserted, with the exception of himself; he resisted all their endeavours to induce him to follow their bad example: his reply was characteristic of a thorough honest Jack:—"I'll stick to my ship, come what will, as I feel that I am as much bound by my bond to her conservatism, for the interest of the Owner, as the Captain is." He remained, and returned to England in the ship.

If the merchants were to give medals to such men as this Hollander, they would multiply trustworthy men: encouragement being one of the greatest incentives to good conduct in the seaman, or, indeed, in any other person.

The Registry Bill is an excellent measure, and in its operation, will in all human probability, *force*, nolens volens, the seamen to be careful in their conduct; but they ought to be allowed to exchange *once* during a voyage, if so disposed.

NAUTICAL RAMBLES.—THE LEEWARD STATION DURING THE WAR.

Port Royal and its Associations.

(Continued from page 619.)

BETWEEN Trinidad and the Isle of Pines there is another batch of banks and cays, and the reefs called *los Jardines*, and the cays of Diego

Perez; the last most western bank is connected with the Isle of Pines. To the northward of the island is a detached bank studded with cays, and called San Sebastian; to the westward of these are the cays of San Felipe, where the fish known by the name of Spanish mackerel are so extremely numerous that they may almost be taken by the hand.

The land here forms another bight, which is called the *Ensenada* of Batabano. There are various channels leading up to it, and it was one of the principal places of resort to the privateers during the war, and to the pirates since the peace. Some desperate encounters took place here and on the shore of the Isle of Pines, the particulars of which I have forgotten. Captain Hobson, the late Governor of New Zealand, particularly distinguished himself against the pirates of this locality, as also the late Lieutenant Geary, who was unfortunately lost in a hurricane on the voyage home from Jamaica.

The coast between the low projections of Corrientes and Antonio, has been the favourite beat of the prowling piratical row-boats; the bloodthirsty and lawless occupiers of which, unlike their patron saint, gave no time to the unhappy and unsuspecting mortals who fell into their hands, for "absolution;"—the plank, the dagger, or the bullet being the ready instruments employed to draw, as the perpetrators thought, an oblivious veil over the horrid tragedies which their hardened hearts and practised hands were in the habit of performing! Retribution, however, eventually overtook most, if not the whole of these desperadoes, and the outraged laws vindicated by the forfeiture of their worthless lives, from the gallows.

During the height of the war, a profitable traffic was carried on by the "free-traders," or as they were more usually called the "force-traders," whose chief anxiety was to guard against the vigilance of the Spanish national vessels, called Guarda Costas.

The resolute skippers of these force-trade vessels, which were, generally small schooners or sloops, were among our hardy seamen, of the same stamp as their less excusable compeers of the smuggling line of the English Channel, are among our pilots* and fishers; and carried on their game "*a toda costa*," and with almost perfect impunity although the penalty, if caught, was death, or a *treat* to the mines! The fact was, that excepting the officers of the Royal Marine service, not a soul but was glad to see them, and ready at any time to conceal and protect them if searched for.

Very few Spaniards cared about the war which had been, *nolens volens*, forced upon their country; and those few were not warmed by patriotism to exert themselves in doing no injury; their endeavours had but one object to fulfil—self-aggrandizement; and, as war was actually existing, excuse for their justification may, perhaps, be deemed unnecessary. But the mass being averse to French influence and dictation, were so far indifferent to the result of the contention, that they never entered into any active measures of moment, in this quarter, to aid their Gallic ally. Indeed so little relish had they for enmity to-

* I have cast these otherwise valuable members of the oceanic profession, in the same category as the other, from having heard from the mouth of one of them, the admission that occasionally they exercised the contraband pursuit, *rather par nécessité*, than otherwise.

wards the British, that they did all they could to keep up a good understanding with them; not, perhaps, from any preference for the people who had, ever since the first settlements of the West, been pretty constant interrupters of their pursuits, but rather from a desire of obtaining necessaries and supplies, conducive to their comforts, at any rate under the existing circumstances, which precluded the possession of these in a legitimate and open way.

The Government of Jamaica fostered and encouraged this singular mode of waging war with the weapons of peace, by granting licenses to individuals willing to run the hazard of converting their commodities into Spanish dollars.

And with this protection as a guarantee against any charge of violating the general laws of the belligerents, or of being accounted by the officers of our men-of-war as traitors, there were many who availed themselves of the privilege, and turned it to good account. Among these "go-a-head" traficantes, the old stagers will remember "Mother Mann," of Port Royal; one of the strangest of the *she*-gender* that ever figured upon the stage of a wharf, or flourished a "cow-skin!" In her composition nature certainly seemed to have taken a freak—to have invested the daughter of Eve with masculine graces that gave to her exterior the peculiarities belonging to the sons of Adam. Among our tars she was familiarly known by the sobriquet of "Old Jack." Whether she was a virgin in all purity, or had ever embraced the perils of matrimony, I am not quite convinced in my recollection, but I am inclined to think that she was a widow—that the key of her wed-*lock* had been lost at sea. Be that, however, as it may, certain it is she pertinaciously refused all attempts (whether made in jest or earnest I cannot declare) of the blue and the red-coated sighers after her golden charms, to *tie* her down in the thraldom of bondhood.

Now one would hardly be inclined to suspect that a beauty of this cast could possibly find favour in the eyes of a young and gallant Lothario, or that his susceptible heart could at the very sight of her "exquiteness," do other than turn icy-cold. But "there is no accounting for taste," for, *mirabile dictu!* it was currently reported, and vouched for, that one of the finest-looking sons of Mars that had ever shed lustre upon the deeds of intrigue, was the favoured gallant of this dainty old charmer,† who, to give her due, was indeed entitled to be considered as the *pink* of all "free-traders." Such is a brief account of the *she* small-craft-owner of Port Royal, and one of the most active supporters of the force-trade, in the island of Jamaica.

I recollect meeting one of these enterprising traders, to my great sur-

* It may be but seemly to apologize for the use of this monosyllable; but as there was nothing beyond the costume apparent that could claim the application of the endearing term "feminine," perhaps we shall not be taxed with a want of respectful courtesy to the fair sex, in its appliance to the particular object spoken of.

† ——————— "Could illusive ray
Here lure to cheat—or flatter to betray?
We know not.—'Tis said, on black authority,
That dubbs, and joes, and pillar'd maccaronie,
Were with the most liberal love supplied,—
And if not—why all we need say is,—it \——."

prize in the town of Trinidad, in open day. We walked a little way out of the city with him to arrange a plan for our escape from the prison of Santa Cruz, whither we were to be sent in a day or two. From his statement there appeared little difficulty in effecting it, as his friends upon the coast would be ready to assist us with horses, his schooner lying conveniently in a creek not far from Santa Cruz, which is situated about 140 miles to the eastward of Trinidad. It so happened that in the short interval we were released,* having been exchanged for some Spanish officers and men captured in Guarda Costas. We did not, however reach the man-of-war until after midnight of the day we departed from the harbour, nor should we have done so then, had we not, after a short conflict, taken forcible possession of the felucca that carried us out; the Dons having come to the resolution of returning, because they could no longer see the ship, as she had gone in chase of a vessel to the westward. We heard her guns.

I have stated that I was received on board of a man-of-war on being released from the Spanish prison. A point of some importance to the feelings and honour of an officer occurred to me at this time, which I think may not improperly be introduced here, as others hereafter may be placed in a similar situation. When I quitted Trinidad, by order of the Commandante de la Marina, I was supplied with a parole of honour document: upon which, as a significant symbol, was marked a heart and cross: and as the Spanish officer,† who was stated to have been sent in exchange for me, had not arrived at the moment of my departure, it was expressly stated in the paper that I was not to serve against Spain, until regularly exchanged: and the Escribano Publico, or Notary, who was employed officially to draw up the document, examined my word of honour to that effect.

After I had been on board the man-of-war a day or two, the First Lieutenant being desirous of getting the command of the prize schooner, (a beautiful Guarda Costa, which was captured at the time we were awaiting for the ship,) intimated to the Captain, that the new comer, (who it is proper to mention, was in a bad state of health,) was "taking it as easy as any gentleman need do." These were the reported liberal words of this illiberal-minded officer. Undoubtedly, under the peculiar circumstances of the case, the "new comer" did not think it was imperative on him to volunteer his services; but it was no pleasure to him, even such as he was, to be idle, or to eat the Nation's salt-junk, and drink their water without a return: nor his fetters remained unshackled. Could he act until these were, according to the due forms of war, removed?

> "Honour and shame from no condition rise,—
> Act well your part,—there all the honour lies."

Who will gainsay that? The First Lieutenant? No! I had a better opinion of him than he seemed disposed to have of the "new comer." It was desirable that the fact of the Spanish officer exchanged for me having been accepted should be ascertained; the mere suppo-

* The Yankees were all detained as slaves: whether the two or three Americans were liberated their release afterwards, I do not know.

† Lieutenant Diego Ramirez, R.N.

sition that he was, could not absolve me of the obligation under which I was bound; this was the impression upon my mind, and from it my conduct was regulated.

Upon the representation of the First Lieutenant, (the Second* was killed a short time before in action), the Captain stated to me, that it was his wish I should take charge of a watch. I told him that I was quite ready and willing to obey his orders, notwithstanding my ill state of health, if he would give me a certificate under his hand that I was absolved from "my word of honour not to serve against Spain until regularly exchanged." Was there anything unreasonable or improper in this request? Yet the Captain considered there was no necessity for compliance; his *verbal* order, he thought, was quite sufficient. I felt much distress of mind in being placed in such an unpleasant situation. It is true there was no threat—no bluster—no attempt, as I had often heard used before, to intimidate by bringing to one's mind the terrors of a court-martial. On the contrary, the desire was expressed in a courteous and gentlemanly manner, and I therefore felt the more distressed. Until my request was complied with, I begged respectfully to decline doing duty. No earthly power, however potent, would have induced me to have done violence to my conscience, or to act in a manner disgraceful to the feelings of a gentleman, which I thought would have been the case had I yielded to the Captain's order. I have no desire that these sentiments should be considered as implying any censure upon my superior officer's conduct. This view of the case, no doubt, was, at the time, to his conviction perfectly just. I do not presume to say otherwise than that he was fully satisfied of that. Still it is possible for even a *Captain* to be *wrong*. In this trying circumstance, I felt supported by the conviction that my cause was just; and when a person acting from principle feels thus, though standing alone, and without other prop, he becomes fortified to the endurance of whatever wrongs may be inflicted upon him.

Happily the Captain, who was in every respect, a mild and most worthy man, upon reflection, saw that my scruples were correct, although the Lieutenant was pleased to imagine that my reluctance proceeded from a desire to evade duty. Now, I have ever made it a rule of conduct throughout life, never to judge hastily of any man; thinking that if we pay the necessary attention to the workings of our own hearts and heads, that they require, we shall have quite enough to do. Besides, it is far better to err on the favourable side, by giving every person credit for his intentions, than run the chance of doing injury. I was a little surprised, therefore, when I learnt the unfavourable sentiments of this officer towards me; but, as he was venting his suspicions upon a phantom of his own creation, his opinion did not trouble me much. Whilst he was on board I did not suppose, from his conduct, that he entertained such; the "cat was let out of the bag" after he was gone away; but I was assured by his messmates, who were now mine, (for I messed in the gun-room), that his sole object in what he said was to get command of the schooner as a tender, with the hope of

* I am not certain whether he had not been the first.

distinguishing himself. There are few who will admire his mode of effecting his purpose.

The written order was given,* and what is more, in deference to my scruples, in precisely the words I dictated. I took instant charge of a watch, and the Lieutenant departed in high glee to his new command; but fortune was not propitious with him.

Before quitting the coast, the receipts for the exchanges were ratified, and the matter ended. The reader will judge for himself, whether I acted right or wrong. I can only say, in addition, that the many years which have rolled by since, and which may be supposed to have matured my judgments, have not produced any change in my sentiments with respect to the conduct I pursued on the occasion. Every man has his own humour in his own keeping: if he forfeits it, he is amenable to punishment,—or where not, to the contempt of his class: but it is too much for another to insist upon your yielding it up to his care; or, to make it subservient to his own convenience or wishes. The ingenuity of the Lieutenant to realise the latter, by making a charge (*pro forma* only we are told), against an innocent unoffending Mid, to compel him to throw his humour to the dogs, as seen, did not succeed. We again leave the reader to form his own opinion of the gallant officer's *nous*.

There was at this time, and probably for centuries before, an old "saw" very much in vogue—*vice* once—within the area of our wooden walls, and much oftener expressed by the Lieutenant than the Captain, "*A subordinate has no right to think.*" The application:—*vis-a-vis*—"*I thought, sir,* I should best fulfil the *spirit* of your order, under the circumstances, in doing as I did," quoth a delinquent Middy to the gruff, ruff, growl: Lieut. "What?" with a stare as wide and as fierce as a rat-catch's, "what! a Midshipman presume to *think?* who ever heard of such a thing!—go up, sir, to the mast-head for your folly, and learn next time to follow the *letter* of your instructions, and let the *spirit* take care of itself." I do not know if this be obsolete at the present day, but common sense tells it is too good a thing to be yielded up in the abstract, some consider there is meaning and discretion in it. There may be a reasonableness—but most persons are averse to automatons in real life. We are in favour of Daddy Neptune's plan of tacking on a mitigative, or rather to his laws: in fact, a reasonable *proviso*. The writer that such would be we may venture to show by an example, occurring to himself, even where adopted without authority—indeed in *direct opposition* to the standing *orders*.

Whilst the ship was refitting in Port Royal, I happened to be left commanding officer, the other two lieutenants being on leave, at Kingston. There were two orders to be found among others, issued by the Captain, for the guidance of his subordinates. The first: that there should be always one Lieutenant on board, and he was not to quit the ship on any account. The second: that every officer belonging to the ships, when meeting a Captain in his boat, should make the men toss up their oars, and the officer rise and lift his hat, as a mark of respect, &c. In the event of any Captain coming up a-stern, the officer was to direct

* I believe it is still among my papers.

the men to lay on their oars, until the Captain came abreast, when the former ceremonies were to be observed.

The Admiral was on board the flag-ship, and also the Governor. A signal was made to our ship for the barge, with a Lieutenant, the crew to be dressed. Here was a dilemma! There being no time for deliberation, I decided at once—gave the master charge of the ship, dressed, and shoved off. But "forms and ceremonies" now stood inconveniently in the way. Captain after Captain was pulling directly across our line, for Port Royal. The operations of "up oars," and "off hats," took place every minute, which necessarily created delay; but I had no alternative. I saw the glass directed towards us, and no doubt some such exclamation escaped the Flag-Lieutenant's lips: "What the d—— is the stupid fellow about, with his oars." Aye! what indeed! I had but just responded to the ideal remark, when "bang" went a gun, and up ran the signal for the frigate's barge! If ever a Lieutenant suffered a martyr's pang I did at that sight. Well, at last I dropped genteelly alongside of the accommodation-ladder, and was about to ascend to report myself, when down rushed the signal-luff, out of breath, charged brim-full with a reprimand from the Admiral! "My dear fellow, I'm very sorry, &c., &c.," and then came the cruel cut, in due form, and for what? The reader already knows. I nodded my head in acknowledgement, bit my lips, and was about to sit down and "chew the cud," when His Grace of Manchester descended. I landed him at Port Royal, and in pulling to the ship, kept my eye on the flag; expecting another summons, but it is probable the Admiral's ire had evaporated. "But," as the Sentimental Journey hath it—"we must *feel*, not argue in these embarrassments."

When the Captain came on board the next day, having "presumed to think" on the late occasion, I was not altogether easy as to the issue. I was happy, however, in finding that he was quite satisfied with my conduct.

Here then we find an officer placed in a situation where he was compelled to commit a breach of discipline in his disregard of a positive order, because no discretion was allowed him. And in fulfilling the *order* of the Commander-in-Chief, he suffered *his* displeasure by executing *that* of his own Captain.

Turn the matter as you please, injustice is not removed. Why should this be so? It is not enough, even in these minor points, to say that a court-martial would relieve every officer who had been compelled by the force of circumstances to deviate from his orders. The court may do so; that rests upon conscientious opinion: but who is to turn aside, as in the case above, the rebuke given by a Chief, and that too arising out of a strict fulfilment of a Captain's orders? Here injustice strikes the innocent. Why should it be permitted to do so? Has the Lieutenant no feelings to be wounded?

It may not be deemed possible to frame orders with such nicety as to enable the executor to meet every contingency that may arise; but the matter seems to be susceptible of being remedied by some such *proviso* as the following:—"You shall execute without fail, &c., except some urgent cause should intervene, or arise to justify a deviation, &c."

No danger to discipline, or to the service, we conceive, would possi-

bly take place from such discretionary latitude, because the executing officer would still be held responsible for his actions, to as great a degree as when bound stringently to execute his orders at his "peril;" the urgency of the cause of deviation being a sufficient guarantee why he should perform them with strict propriety.

In conflicting cases of the above sort, it may be said, that the Commander-in-Chief's orders supercede all others, and that the course I pursued was the correct one. But after all, that point must rest with the officer's own Captain. Caprice, or a bad-temper, may occasion much uneasiness to the subordinate, who it is much to be wished the naval laws would more definitely protect.

A large French frigate, trusting to her weighty metal, and "clean heel" had the temerity, in her flight from the eastward, to run in the usual track of vessels, to the southward of the islands, and within a few miles of the land. To the best of my recollection, there was not on the station an English frigate equal to her in size or weight of guns, which were 30-pounders (French) on her main-deck. A few years before, the Anson and Acasta were there, and did good service, but at this time the largest frigate carried only 18-pounders.

The Frenchman first encountered the *Rainbow*, one of the small-class frigates, commanded by Captain Wolrige, a very gallant officer, which after a close but unequal combat, was disabled. The object of the Frenchman was not to make captures, but to escape with as little delay as possible:—he pushed on, and off Navassa, fell in with the *Avon*, an 18-gun brig, under the command of Captain H. T. Frazer, as gallant a young officer as the service could boast of. A furious action ensued, and was continued with the most persevering determination, until the little vessel was so cut up as to be unable to pursue her weighty opponent. In her helpless state she might have been sunk, but the Frenchman, who had been terribly "hammered" by the brig's 32-pounders, seemed glad of the opportunity for escaping the humiliation of being beaten in detail, and ultimately falling a prey to an inferior force.

At this time there was a little 12-pounder frigate cruising off Cape St. Nicholas, or returning from a cruise. Early in the morning she descried a ship under the land of Cuba, (Cape Maiz), at some distance off; but, after inspection with the glasses, she was considered to be a large Jamaica ship, (a runner), which had been boarded the evening before; not dreaming of a French frigate in that position. Without classing this as an instance of opinion being too readily admitted in matters of this sort, we may, by and by, offer a few remarks on the subject, and give a few instances to show the propriety of examining all vessels. In the mean time let us follow the fugitive.

(To be continued.)

Hydrographical Notices.—*By Col. E. Sabine, R.A.*

Remarks on the summary in April No., p. 187.

In the voyage between Cape Mount and Cape Three Points, the *Pheasant's* progress appears to have been accelerated about 180 miles,

by the current, which, during the season when the S.W. winds prevail on that part of the coast of Western Africa, runs with considerable rapidity in the direction of the land, round Cape Palmas to the eastern parts of the Gulf of Guinea. The breadth of this current abreast of Cape Palmas varies with the season, and has been found as much as 180 miles; but in its subsequent course to the eastward, it enlarges to nearly 300, and occupies the whole space between the land on one side, and the equatorial current running in an opposite direction on the other; the velocity abreast of Cape Palmas and Cape Three Points, and in the vicinity of the land, was in May about two knots an hour; and further to the eastward, where the Pheasant crossed its breadth from Cape Formosa to St. Thomas, and where its velocity had been much diminished by the dissipation of its waters, it was found still to preserve a general rate of rather less than a mile an hour; and a direction, a few degrees to the southward of east. Between Cape Three Points and Lagos, the observations were suspended in consequence of the greater part of the officers and men being absent in the boats, examining merchant vessels anchored on the coast, and suspected of being engaged in the trade in slaves. The little effect of the current experienced between the 8th and 9th of May, was occasioned by the slack water in the Lagos bight, from which the Pheasant did not re-enter the fair stream until the morning of the 9th. There appears to have been a southerly deflection between the 10th and 11th for which no very obvious reason presents itself. The general temperature of the stream in the mid-channel in the Gulf of Guinea, in April and May, exceeds 84 degrees, diminishing to 82 and 83, on its southern border, where it is in contact with the colder water of the equatorial current; and occasionally to 79°, and frequently to between 79° and 81°·5, on its northern side, in the proximity of land.

In the passage from the coast of Africa to the Island of Ascension, the Pheasant appears to have entered the equatorial current, almost immediately after her departure from the entrance of the River Gaboon; as she was decidedly under its influence when passing the southern extremity of the Island of St. Thomas. This current is formed by the drift water impelled by the trade winds in the southern Atlantic, (which in the neighbourhood of the continent of Africa are very much southwardly,) towards the eastern part or head of the Gulf of Guinea; where, being opposed by the waters brought to the same spot by the Guinea current, the drift water streams off in the direction of the equator and principally on its southern side; and being continually fed in its western progress by the drift from the S.E., (becoming more and more inclined to the meridian, as the influence of the continent on the regular direction of the trade wind lessens from distance,) the stream pursues its course quite across the Atlantic to the continent of South America, where one portion of it proceeds along the northern coast of Brazil to the Caribbean Sea and Gulf of Mexico, and contributes in part to raise the level of those seas, and thus to lay the foundation of the Gulf Stream.

The Pheasant's voyages from the coast of Africa, successively to Ascension, Bahia, Pernambuco, Maranham, Trinidad, and Jamaica, were performed principally in the current, the origin and progress of which have been thus stated.

The equatorial current is not usually met with so far to the northward,

at its commencement on the coast of Africa, as it was found by the Pheasant in the month of June: but it is probable that at the season when the trade winds are strongest, and approach nearest the equator, the drift water may be impelled into a more northern parallel than at other seasons, before the opposition to its direct course becomes so strong, as to cause it to stream off to the westward. Its more usual northern limit, in the meridian of the Island of St. Thomas, is considered by Major Rennel to be in the second or third degree of south latitude. The direction of the stream was as nearly west as could be inferred from the observations, and its rapidity between the meridians of 7½ East, and 7½ West, averaged forty miles a day. We appear to have passed out of the stream in the first of June in latitude 5° S., and longitude 8° W., into the drift current from the S.E., which contributes to its supply and to preserve its velocity across the Atlantic: it may be seen that the drift water was pressing on the southern border of the stream with a force of 60 and 80 miles in 24 hours, in a direction oblique to and accelerative of its course.

In the passage between the river Gaboon and Ascension, being a distance of 1200 geographical miles, the Pheasant was aided by the current above 500 miles in the direction of her course.

In consequence of the shifting of the trade wind in the vicinity of the [illegible] the water impelled before it, which forms the commencement of the equatorial stream, arrives from a more remote southern meridian, and is therefore of a cooler temperature than the drift water which successively rolls over it from the S.E., impelled more obliquely to the meridian, and consequently arriving from latitudes less distant from the equator. Thus the temperature of the stream varied from 72·5 to [illegible] while that of the drift current was 77 and 78°. But the more important distinction, both in amount and in utility in navigation, is between the waters of the Equatorial and of the Guinea currents. These [illegible] the meandering intermingling of variable streams, in contact with each other, flowing with great velocity in opposite directions, and having a temperature alternating from ten and twelve degrees. Their [illegible] from this variable and each other and to the land for above [illegible] and preventing as a vessel, wishing to proceed along [illegible] from one or the other current, will [illegible] from two to five miles a day, or retarded to the [illegible] advantage therefrom, derivable from the difference [illegible] discriminate at all times in [illegible] is great as it is obvious.*

[illegible] the water of the equatorial current to the [illegible] upon an apparent peculiarity in [illegible] with the climate of the Coast of [illegible] British possessions, from the Gambia in [illegible] Gold Coast. June, July, and August are [illegible] at St. Thomas, on the contrary, they [illegible] dangerous, although they are not so to the [illegible] and rheumatism during their continuance. [illegible] the equatorial current is from 10 to 12 degrees, and that its northern border, which [illegible] Thomas at a distance from 120 to 180 [illegible] was found in June in contact, or very

The voyage from Ascension to Bahia commenced in the continuation of the same drift current from the S.E., in which the latter part of the passage to Ascension was performed; but on the 13th of July, the Pheasant appears to have re-entered the southern border of the equatorial current, in the longitude of 22½ W., and latitude of 10½ S. The

nearly so, with the island itself; and it is not improbable, from a consideration of the causes which occasion its advance towards the equator when the sun is in the northern signs, that in July it may extend so far, as even to include the whole island within its limits.

The temperature of the air is known to be immediately dependant on that of the surface water of the sea, and to be influenced nearly to the full extent of any alteration that may take place therein. In crossing the Gulf of Guinea from Cape Formosa to St. Thomas, the air, over the surface of the Guinea current, observed in the shade and to windward, at sunrise, noon, and sun-set, averaged 81°.5, the extremes being 70° and 83°·5; whilst in the passage from the river Gaboon to Ascension, over the equatorial current, the air averaged only 74° the extremes being from 73·°5 to 74°·5; a part of the passage being, moreover, on the very edge of the two currents, and within sight of St. Thomas. The vicinity of the equatorial current, therefore, when the sun is in the northern signs, cannot fail materially to influence the temperature of the island, particularly as the wind is always from the south, and thus to affect its climate. Situated on the equator, St. Thomas has naturally two cold seasons, or winters, in the year, the sun being equally distant in June and in December; but in June, July, and August, is superadded the influence of the surface water of the ocean several degrees colder than in November, December, and January; rendering the months of June, July, and August, pre-eminently the winter of St. Thomas; in which the natives complain of colds and rheumatism, and the health of Europeans is less affected than at other seasons, because the climate is then less dissimilar than usual to their own.

The comparative unhealthiness of Prince's Island to St. Thomas, and of both to Annabona, as the residence of Europeans, has been frequently and particularly noticed by Portuguese authorities, and is universally recognized at Prince's Island and at St. Thomas. It may be a sufficient explanation to remark, that Annabona is always surrounded by the equatorial current; Prince's always by the Guinea current; and that the position of St. Thomas is intermediate, and its climate is occasionally influenced by both. In tropical climates a very few degrees of temperature constitute an essential difference in the feelings of the natives, and in the health of Europeans.

The point of deposition varied over the differently-heated surfaces of water; in correspondence with the temperature of the air; so that, although the quantity of moisture was diminished in the colder air over the equatorial current, the proportion of the quantity to that which would have been required for repletion, was as nearly as possible the same as over the Guinea current, being on the average 84°.5 parts in 100° in both instances. The air, therefore, was equally moist over the equatorial as over the Guinea current, although in the one case the weight of vapour in a cubic foot (derived from the averages) was 10 grains, and in the other 7.93 grains only. The cold air incumbent on the equatorial stream, being borne by the south wind over the surface of the Guinea current, caused the deposition, which generally obscured the horizon to the north of St. Thomas, during the pendulum observations, as noticed in my work; and which fell, as we understood, in heavy rain in the offing. The quantity of vapour in the atmosphere over the island being less than that over the nearly surrounding water of the Guinea current, (an effect of the high land of which the island consists,) no deposition took place on the island itself. The hygrometer indicated the temperature of its superincumbent vapour to be between the extremes of 71° and 74°·5 observed three times a day between the

evidence of many voyages in different years, the journals of which have been submitted to Major Rennell's examination, have led him to the conclusion, that it is the ordinary course of that stream, to divide into two branches about the twenty-third degree of west longitude, the northern portion flowing in a N.W. direction, and diffusing its waters in the basin of the Atlantic, and the southern, which is the largest portion, proceeding in a direction to the southward of west, until it reaches the coast of the continent of South America; where it is again subdivided by the projecting part of the coast between Cape St. Roque and Cape St. Augustin, the northern branch coasting the north of Brazil and Guiana to the West Indies, and the southern branch proceeding down the eastern side of the continent towards Terra del Fuego. The Pheasant's experience corresponded in all respects with this general view. The direction of the southern part of the equatorial stream, into which she entered on the 13th of July, became gradually more and more to the southward of west on approaching the continent; being due west between the longitudes of 22°½ and 26°; S. 82° W. between 26° and 29°; and S. 71° W. between 29° and 33°; and the apparent set between the noons of the 16th and 17th of July is obviously compounded of the influence of the equatorial stream, (then probably become still more southwardly) during the first part of the twenty-four hours, and of the northerly current, during the latter part, which the observations between Bahia and Pernambuco shew to prevail in the vicinity of the coast included between those stations. The Pheasant may therefore be considered to have crossed the whole breadth of the branch of the stream which proceeds to the S.W., by having passed out on its western side between the longitudes of 33° and 36°, and to have ascertained its general velocity to have exceeded half a mile an hour, by the according observations of the 14th, 15th, and 16th of July.

From Pernambuco to Cape St. Roque, the northerly current rapidly accelerated, until in passing the Cape it may be considered that the Pheasant had entered the full stream of the other branch of the equatorial current; namely, of the one which pursues its way along the northern coast of Brazil and Guiana to the West Indies. Between the noons of the 16th and 17th, she was set 44·5 to the north, and 42·5 to the west, making a general effect in the twenty-four hours of N. 44° W., 62 miles; but as she did not round Cape St. Roque, until midnight, the course having been altered for that purpose at half-past eleven p.m., it must be understood that the direction of the current was probably more northerly

26th of May and the 12th of June. The range in the Gulf of Guinea was from 76° to 80°.

It is worthy of notice to what little distance the colder air, impelled by the constant south wind, attained over the Guinea current, before it became itself heated by the condensation of the vapour of higher constituent temperature. The great bodies of the air and of the vapour over the respective currents, though so dissimilar in temperature, were as little affected by their contiguity, as the surface waters of the currents themselves. By their mutual and opposite action, the air in condensing and thus reducing the temperature of the vapour, [illegible] heat liberated in the condensation of the vapour in raising that of the ixture speedily destroyed the differences; and the effects of the conti- thus limited to a very few miles within the border of either stream.

in the first part of the interval, and more westerly in the latter part, than the general effect; and that the velocity may in like manner have been less than the rate of 62 miles to the south of Cape St. Roque, and more than that amount after passing the Cape. The purpose of stopping at Maranham obliged the Pheasant to draw nearer the land on the following day, than would have been expedient, had she been bound direct to the West Indies, and been desirous of preserving the full advantage of the current in her favour; on examination of the tabular results, it will be obvious, that by thus nearing the land, she quitted the full strength of the stream, and that she did not re-enter it again until the day after her departure from Maranham, when it was found to be running with the astonishing rapidity of ninety-nine miles in twenty-four hours. It may also be seen that although in the space comprised between the direct course of the stream from Cape St. Roque to the West Indies, and the coast of Brazil, the velocity progressively diminished on approaching the land, no counter current was found to take place, but the westerly direction was still maintained, though at the reduced rate of less than half a mile an hour, when very near the land. It may be attributed to the rapidity with which the water is thus swept along the shore, that no change is perceptible in its temperature, on approaching a coast which is so remarkably shallow, as to have not more than seventeen fathoms water at thirty-six miles in the offing..

At 10 A.M. on the 10th of September, whilst proceeding in the full strength of the current, exceeding, as already noticed, four knots an hour, a sudden and very great discoloration in the surface water a-head was reported from the mast-head, and from the very rapid progress which the ship was making, was almost immediately afterwards visible from the deck. Her position in 5° 08′ north latitude, and 50° 28′ west longitude, both known by observation, sufficiently apprised us that the discoloured water which we were approaching could be no other than the stream of the river Amazon, preserving its original impulse at a distance of not less than 300 miles from the mouth of the river, and its waters being not yet wholly mingled with those of the ocean of greater specific gravity, over the surface of which it has pursued its course.

We had just time to secure some of the blue water of the ocean for subsequent examination, and to ascertain its temperature, before we crossed the line of its separation from the river water, the division being as distinctly preserved as if they had been different fluids.

The direction of the line of separation was N.W.b.N., rather northerly; great numbers of gelatinous marine animals, species of the Genus Physalia, were floating on the edge of the river water, and many birds were fishing apparently on both sides of the boundary.

The temperature of the ocean water was 81°·1, and of the river water 81°·8 both within a short distance of the division line; the specific gravity of the former was 1·0262, and of the latter 1·0204, distilled water being unity: the ocean water had also been found 81° at seven A.M. on the same morning. At noon, having advanced considerably within the boundary, so that it was no longer in sight from the ship, the specific gravity of the surface water was 1·0185, and its temperature 81°·8.

Being desirous of ascertaining the depth at which the water of the ocean would be found unmixed with the river water, Dr. Marcet's very

simple and practical apparatus was employed to bring up water from fifty fathoms, the specific gravity of which proved 1·0262 ; the bottle was then sent down a second time to twenty-one fathoms, at which depth the specific gravity was also 1·0262, limiting the depth of any admixture of the fresh water to less than 126 feet. Its superficiality was further evidenced by the colour of the water in the ship's wake, which was much more blue than that of the general surface. The temperature of the water from fifty fathoms was 77°·2, and from twenty-one fathoms, 80°·5 ; we had no bottom with 105 fathoms.

From noon on the 9th, till 10 A.M. on the 10th, we had found the current of the ocean running with an average velocity of four knots in a direction N. 54° W., the ship's true course had been very nearly N. 45° W. ; the division line of the streams trended about N. 33° W. It was obvious, by the general appearance of the respective surfaces, that the current of the river water was running with considerable rapidity, in a direction inclined to that of the ocean, and nearly coinciding with the line which marked their separation ; the ship's course was, therefore, altered a point westerly. During the afternoon of the 10th, and morning of the 11th, the colour and specific gravity of the surface water indicated that we continued in the river stream ; but that it was becoming latterly more and more mixed with the sea water. At noon, in latitude 7°·01′, and longitude 52° 38′·5, the specific gravity was 1·0248, temperature 81°·5 ; and from twenty fathoms, 1·0262 Between noon on the 10th and noon on the 11th the ship was set N. 38° W., sixty-eight miles, or rather less than three miles an hour ; which may, therefore, be considered the general direction and rate at which the water of the Amazon was proceeding at the distance of 300 miles and upwards from its natural banks. The original impulse at its discharge into the ocean is to the eastward of north ; so much, therefore, had its course been deflected, by having to sustain the continual pressure of the current of the ocean on its eastern side. As the initial velocity must have greatly exceeded that which it had preserved after a course of 300 miles, and as the force of the current which presses on it is much less in the neighbourhood of the land than it subsequently becomes, it is probable that the deflection may have been scarcely sensible in the early part of the course, but much more rapid latterly than would be due to the whole effect divided by the distance ; and that a further deflection of the 16 degrees, which measured the inclination of the streams where the Pheasant crossed the division line, might not require much more distance for its accomplishment ; when the course of the streams being parallel, the obstacle to the diffusion of the river water on its eastern side would be removed, and the marked line of the separation of the streams would gradually cease to exist. In the early part of the river's marine course, as it may be termed, and where the force of the current of the ocean is comparatively weak, the greater obliquity of its direction may compensate for its want of force, in enabling it to oppose the diffusion of the river water. On the western side the fresh water is gradually and insensibly lost in that of the sea ; at noon on the 12th, the specific gravity of the surface water was 1·0253, in latitude 7°·05, and longitude 53½°.

The effect which the stream of the Amazon produces on the current of the ocean in thus crossing its course, is to accumulate the water brought

by the equatorial current, until it streams off with a rapidity which gradually deflects, and ultimately overpowers the obstacle, which opposes its more regular flow; it is to the accumulation from this cause, that the partial velocity of ninety-nine miles in twenty-four hours, much exceeding the average rate of the branch of the equatorial current between Cape St. Roque and the West Indies is to be attributed. The southern border of the current is also removed by it to a distance from the land, leaving a space of the ocean, bounded by the river water on the east, the land on the south, and the equatorial current on the north, which is occupied by irregular streams of various and uncertain strength and direction, as shown by the Pheasant's experience between the 11th and the 14th of September. It is desirable that vessels bound from the Brazils to the West Indies should, therefore keep well off the land of Guiana, in order to preserve the strength of the equatorial current in their favour; whilst others, endeavouring to make a passage along the coast to the eastward, should be especially cautious to keep in the space within the current. The Pheasant re-entered the current about the eighth degree of latitude, and in the fifty-seventh of longitude, and was subsequently indebted to its influence, between two miles and two miles and a half an hour, until her arrival in the Gulf of Paria.*

The observations in the passage from Trinidad to Jamaica indicate a general set of the surface water across the Carribbean Sea towards the Gulf of Mexico, averaging about sixteen miles in each twenty-four hours. The northerly inflexion, on approaching Jamaica, was occasioned by the indraft between Cape Tiburon and Point Morant.

From Jamaica to the Havannah the Pheasant was engaged in conducting a convoy, which obliged a suspension of the observations.

In crossing the Caribbean Sea from Trinidad to Jamaica, between the 9th and 17th of October, the temperature of the surface water, observed always at 8 A.M., and occasionally at other hours, was never less than 82°·8, nor more than 83°; between Jamaica and Grand Cayman, on the 10th and 11th of November, the minimum was 83°, and the maximum at 3 P.M. 83°·8; from the Cayman Islands to the entrance into the Gulf of Mexico, between Yucatan and Cuba, and in the open part of the Gulf itself, the surface varied from 82° to 82°.5†; but on approaching Havan-

* In the passage from Maranham to the West Indies, and in crossing the mouth of one of the largest rivers of the globe, the hygrometrical state of the atmosphere was the subject of very frequent and careful observation on each day; no effect of the river, however, on the state of the aqueous vapour was perceptible: the point of deposition varied only between 72°.5 and 74°, and the air between 79° and 82°, the higher temperatures of both taking place when we had arrived abreast of Surinam, and the surface water had increased to 83°. In the Gulf of Paria, where the general temperature of the surface is raised to 84°.5 by the admixture of the heated water from the smaller branches of the Orinoco, the air was further augmented to 84°, and the Point of Deposition to 75°.5. Between Point Galeotta and Port Spain, we crossed the stream of one of the branches of the Orinoco, the temperature of which was 85°.5, and the specific gravity not more than 1.0064; the general surface of the Gulf being 1.0204.

† The particular observations were as follows, and are accompanied by the temperatures of the air, and of the point of deposition, observed at the same hours.

nah on the morning of the 18th, we were apprised by the colder temperature of 80°·5, that during the preceding night we had entered the current, which descends from the northern shores of the Gulf of Mexico along the coast of Florida, and forms the head of the Gulf stream. In the sub-

Between Trinidad and Jamaica.					Port Royal, Jamaica.					Between Jamaica and Havannah.				
Oct.	Time.	Water.	Air.	Point of Depos.	Oct.	Time.	Water.	Air.	Point of Depos.	Nov.	Time.	Water.	Air.	Point of Depos.
		°	°	°				°	°			°	°	°
11	8 A.M.	83	83·2	77.5	20	10 A.M.	In the offing 83°; in the middle of the harbour 81°,5, at sunrise; 83°,5, at 2 P.M.	83.7	76	10	9 A.M.	83.1	82	
,,	2½ P.M.	83	83	78.5	22	noon.		83.5	76.5	,,	3 P.M.	83.8	83.2	
12	8 A.M.	83	82	76.5	23	7 A.M.		78.8	76	11	8 A.M.	83	81.8	74
13	8 ,,	82.8	83	77.5	,,	2 P.M.		82.5	76	13	8½ ,,	82.5	80.8	72
14	8 ,,	82·9	82	78	24	noon.		83	77	14	8½ ,,	82.2	79.7	72
15	8 ,,	83	82	rain.	25	9½ A.M.		81.7	75	,,	3 P.M.	82	78	rain.
16	8 ,,	83	83.4	77.5	29	noon.		85.5	78	15	8½ A.M.	80	78.8	72.5
17	8 ,,	83	82		30	10 A.M.		84·5	78	17	8½ ,,	82	80.3	74.5
,,	noon.	...	82	77	31	10 ,,		83	76	,,	2½ P.M.	82.1	80.2	71.5
					Nov.									
					1	10 ,,		82.5	75	18	8½ A.M.	80.5	78·9	73
					2	6 ,,		78	75					
					3	6 ,,		78.5	76					

The light rain which fell on the afternoon of the 14th of November, in the passage between Jamaica and Havannah, was a precipitation from an height above the earth's surface, as the air near the surface was very far from being replete with moisture at the time. It was produced by the commencement of a wind from the N.E. (the same, I believe, which is called at Havannah, El Norte,) which almost instantly lowered the temperature of the air two degrees ...ace, and of course correspondingly in its ascending progression, whilst ...nt and its progression remains unaltered. The height, therefore, at

sequent passage from Havannah to the Straits of Bahama, on the 27th, 28th, and 29th of November, we crossed the narrow sea formed by the northern shore of Cuba and the Florida reefs, in which the waters of the stream are comprised, previously to their discharge into the Atlantic: the surface water in this passage varied from 80°.5 to 80°.7, which may therefore be considered as the initial temperature of the gulf stream, towards the end of November. The strait between the Bahamas and the eastern side of Florida, which forms the outlet of the stream, is rather less than 200 miles in length, and from 33 miles at the narrowest part of the water-way, to 50 miles at the widest, in breadth. The Pheasant was at the southern extremity of the strait at noon on the 29th, and at the northern extremity at noon on the 30th, with good observations of the latitude on both days, and with especial care given to the intermediate reckoning. The rate of three miles an hour, (or more exactly seventy miles in twenty-four hours) may, therefore be regarded, with confidence, as the initial velocity of the Gulf stream at that period.

The maximum of its temperature in the strait was 80°.8, and the minimum observed 80°.5; but the Pheasant did not approach the shore on either side, where the surface is known to be colder, by reason of the vicinity of land.

The diminution in the rapidity of the stream on the 1st, 2d, and 3d of December, is the consequence of its expansion after the outfall into the Atlantic; it is probable, however, that on neither of the three days was the Pheasant in the full strength of the current, being nearer the inner border, where the velocity is checked, and the waters accumulated, by the direction of the coast of America between Charleston and Cape Hatteras; the consequence of the accumulation is seen in the increased rate on the 2d and 3d, in comparison with that on the 1st of December; and in the very remarkable circumstance, that after passing Cape Hatteras the velocity experienced between the 3d and the 5th of December was actually greater than the initial velocity at the outlet, being 3·2 miles an hour on the average of the forty-eight hours, or seventy-seven miles in each twenty-four hours; and was, doubtless, considerably greater than

which the temperatures of the air and vapour would coincide (by reason of the difference in their respective ratios of cooling) would at once descend a space equivalent to that required to diminish the temperature of the air two degrees in its ascending progression, and a precipitation would take place throughout that space too copious to be altogether re-dissolved by falling into a warmer atmosphere; and thus some portion of it would reach the surface, forming the light rain which we experienced. It was not, however, of long continuance, the superfluous moisture being disposed of, and the atmosphere speedily adapting itself to the new order of circumstances, by the processes which have been so well pointed out by Mr. Daniell, in his essay on the habitudes of an atmosphere of permanently elastic fluid mixed with aqueous vapour.

I am not able to assign with confidence the cause of the surface water being only 80° on the morning of the 15th; but I suspect that it evidenced the presence of a thread of the current which descends from the northern shores of the Gulf of Mexico along the coast of Florida; and of which a small portion from the western border is sometimes turned to the westward by the northern coast of Cuba on which it impinges, and takes a course towards Cape St. Antonio.

The charge of a convoy in a sea so much infested with pirates was incompatible with the measures which would have been necessary to have ascertained more particularly the cause of the decrease in temperature of the surface water.

the average during a part of the time. The accumulation of the water of the stream in the neighbourhood of Cape Hatteras, to such an extent as to occasion it to flow off with even greater rapidity than on its discharge into the ocean from the Gulf of Florida, is a fact which I believe had not been previously observed, but which may be explained by a brief notice of the different states, at different seasons of the current, and of the ocean through which it pursues its course. In the summer months, the stream issues from the outlet with a velocity nearly one-third greater than at the period of the Pheasant's voyage; its original northerly direction, received from the Bahama channel, is turned considerably to the eastward of north, (about N. 50° E.) by the coasts of Georgia and South Carolina, in which new direction it passes Cape Hatteras, and pursues an unobstructed course, until it impinges upon the St. George's bank to the eastward of Nantucket, by which it is turned still more to the eastward; but as it strikes the bank very obliquely, it is deflected without material accumulation of its water, or increase of velocity. The St. George's bank is the last obstruction that the stream encounters, as it never afterwards approaches land. There is, therefore, no accumulation in the summer months in the neighbourhood of Cape Hatteras; but on the contrary the western border of the stream expands into the great Bay between Cape Hatteras and Nantucket, and occasions a diminution rather than an increase in the velocity at the surface; accordingly it is found that the force originally communicated at the outlet is progressively diminished from above eighty miles in twenty-four hours in the first 180 miles after its discharge into the Atlantic, usually to less than seventy miles when abreast of Cape Hatteras.

On the approach of winter, the disparity in the general level of the Gulf of Mexico and the Atlantic is diminished by the reduction in the level of the Gulf, and the impulse communicated to the stream at its fall into the Atlantic is proportionably lessened. At that season, also, an alteration takes place in the level of the part of the ocean towards which the course of the stream is directed. The heavy autumnal gales from the north and north-east impel before them the superficial waters of the north-western Atlantic into the space comprised between the coast of America and the Gulf stream: this space, which is of considerable width between Cape Race in Newfoundland and the northern border of the stream, narrows towards the westward, and has no outlet; the drift water, consequently accumulates, and presses wholly against the northern and western borders of the current, and by raising the usual level of the ocean, prevents the surface water of the stream from reaching the Nantucket and St. George's banks, and opposes the expansion of the western border into the recession of the coast of the continent between Cape Hatteras and Nantucket; the accumulation of the Gulf water is thus occasioned, which streams off to the north-east with the augmented velocity experienced by the Pheasant between the 3d and 5th of December. It is probable that the occasional effects thus noticed are very superficial, and that the great body of the water which issues from the Gulf of Florida, and is of considerable depth, is governed, both in direction and velocity, solely by the original impulse, and the banks on which it impinges; but navigation is more immediately concerned with the surface current *only*.

On the 5th of December, between 10 A.M. and noon, the Pheasant quitted the Gulf stream, passing out on its northern side. At 8½ A.M. she was in longitude by observation 72° 25′ W., and in latitude, deduced from the subsequent noon, 36° 14′; the temperature of the surface water was 74°, and of the air 60°.5. At 10 A.M., the temperatures being still the same, the depression of the horizon, observed with a dip sector from the Pheasant's gangway, where the height of the eye was 15 feet 3 inches above the sea, was 4′ 56″.6, being an excess of 1′ 05″.6 above the usual computed and tabular depression. On repeating the observations at noon, it was found that a change of great magnitude had taken place intermediately; the horizon, viewed from the same height, making an angle, on the second occasion, of only 3′ 36″.6 with the horizontal line passing through the eye. As the ship was in both instances very steady, and the horizons perfectly clear, the observations were decided and certain; and the utmost error of which either might be suspected could not be more than 5″. So great an alteration in the refractive quality of the atmosphere led to the immediate suspicion, that the temperature of the surface water of the sea must also have greatly altered, and that we must have passed from the warm water of the stream into the colder surface of the general ocean. This suspicion was confirmed on trial, the temperature having fallen from 74° at 10 A.M. to 62.°4 at noon, being a difference of 11°.6. As a measure of precaution on such a sudden and great decrease, Captain Clavering immediately sounded, but had no bottom with 120 fathoms: the temperature at 110 fathoms, indicated by a register thermometer attached to the line above the lead, was 51°.5. The distance from the nearest banks noticed in the charts was sixty-five miles.

The northern boundary of the stream, where we had thus quitted it, was between the latitudes of 36° 26′ and 36° 38′, and in the meridian of 72° 30′ W. The surface water on which we entered was in motion to the westward, at the average rate of sixteen miles experienced in the following twenty-four hours, and generally to the west and south-west between the northern side of the stream and the banks on the coast of Maryland. This motion may be more properly characterized as a drift current, occasioned by the prevalence and strength of recent northerly gales, than as a counter-current. In approaching the banks, the surface water at 8 A.M. and at noon on the 7th of December was 59°.5; at 3 P.M. it had fallen to 54°.2, on which we immediately sounded, and found bottom in thirty-three fathoms: on the following morning, in thirty fathoms, the surface was 53°.5, and at 8 A.M. on the 9th in twelve fathoms, but still with no land in sight (being twenty miles off the coast,) 49°.5. In the afternoon of the same day, when about two miles distant from Sandy Hook, the water had finally lowered to 45°. Thus in a space of the ocean scarcely exceeding 200 miles in direct distance, we found the heat of the surface progressively diminish from 74° to 45°.

On a general review of the influence of the currents which have been thus particularized, on the Pheasant's progress, in her voyage commencing at Sierra Leone, and terminating at New York, it may be seen that she was indebted to their aid on the balance of the whole account, and in the direction of her course from port to port, not less than 1600 geographical miles, the whole distance being under 9000 miles; affording a very striking exemplification of the importance of a correct knowledge of the cur-

rents of the ocean to persons engaged in its navigation; and consequently of the value of the information, in the acquisition and arrangement of which Major Rennell has passed the later years of his most useful life. The publication of the charts of the currents in the most frequented parts of the ocean, which he has prepared with his accustomed and well-known indefatigable assiduity, and strict adherence to the evidence of facts,—as soon as he deemed them sufficiently complete for the public guidance,—became a most important service rendered to practical navigation.

On the Depth at which the Water of the Ocean within the Tropics is found at the temperature of its greatest density.

The greatest density of sea water resulting from its temperature takes place at 42°, or thereabouts: if heated above, or cooled below that amount, it is rendered specifically lighter, and in the natural progression must be found incumbent on water of 42°.

In the existing state of the ocean, the temperature of 42° may be considered as the mean heat of the surface of the sea in a parallel between the latitudes of 65° and 70°; from whence the influence of external causes renders the surface colder towards the pole, and warmer towards the equator, and in both cases specifically lighter, than water of 24°.

In approaching the equator, (or rather, more generally the space within the tropics, to every part of which the sun is periodically vertical,) the warmth of the surface water increases, and the heat penetrates to greater depths; in descending beneath the surface, the temperature progressively decreases and the density augments, until the term of 42° (or thereabouts) is reached; beneath which no further alteration of either takes place, dependent on influences operating on the surface. It was to ascertain the depth at which the term of this progression might be met with in the tropics, that the following experiment was made.

In the Caribbean sea, in latitude 20½ N., longitude 83½ W., nearly midway between the Cayman Islands and Cape St. Antonio at the west end of Cuba, in the afternoon of the 13th of November, 1822, a Six's self-registering thermometer, enclosed in an iron cylinder, having holes in the top and bottom to admit the free access of the water, was lowered to a depth exceeding 1000 fathoms. A weight of 75 lbs. was attached to the end of the line, and 11 coils of 113 fathoms each, and 3 fathoms of a 12th coil were veered, making altogether 1246 fathoms. The weather being very favourable, with light airs and little swell, the ship's drift was bodily to leeward, without either head or stern way. The 1246 fathoms were veered in rather more than twenty-five minutes, at the expiration of which time the line was fairly on the ship's quarter. Under such circumstances, the depth to which the thermometer was sunk must have exceeded a thousand fathoms, as an allowance of 246 fathoms for stray line would be more than ample, if no bight of consequence existed in the rope, which, from the rapidity with which the weight drew out the line, appeared to be the case; 246 fathoms of stray line would be an equivalent to a drift of four-fifths of a mile in twenty-five minutes, whereas that of the ship did not exceed half a mile an hour. The line was hauled in

in fifty-three minntes, when it appeared that the thermometer had registered 45°.5, the surface being 83° ; whence it may be reasonably inferred that 100 fathoms more line would have sunk the thermometer to 42°, the rate of cooling being on the average of the whole depth about twenty-eight or twenty-nine fathoms to a degree of Fahrenheit ; and thus that the sea water would have been found at its maximum of density, dependent on temperature, at about 1200 fathoms below the surface.

The thermometer used in this experiment was made expressly for the purpose to which it was applied ; it was of the ordinary construction, except that the top of the tube, in which is contained the index of heat, was hermetically sealed instead of being closed by a cork, as is sometimes the case. I have since sunk the same thermometer in the same apparatus to 650 fathoms, accompanied by a similar thermometer enclosed in a strong iron cylinder without perforations, and of which the top screwed down upon leather, so as to exclude the access of the water to the interior of the cylinder, and thus to prevent any effect which might be supposed to be occasioned in the indications of the free thermometer, by the increased pressure of water at great depths upon its exterior surface. The two thermometers were suffered to remain below above an hour, to allow the air in the inside of the closed cylinder to adjust itself to the temperature of the surrounding water ; and on their being drawn up, they were found to have registered precisely the same indication.

A notice of the preceding experiment in the Caribbean Sea was read before the Royal Society in April, 1823, and published in the *Philosophical Transactions* of that year. I have since learned that a similar experiment had been made in the ocean between the tropics, in 1816, by Capt. Wauchope of the Royal Navy, then commanding His Majesty's ship Eurydice ; and as the interest and value of each of the results, separately considered, are greatly increased by the very remarkable corroboration which they afford to each other, I have obtained Captain Wauchope's permission to insert the following detailed account of his experiment.

The thermometer used was a common one of Fahrenheit ; it was enclosed in the middle of six cases, all of tin except the outer one, which was of wood ; each of the cases had valves at the top and bottom opening upwards, so that the valves might remain open whilst descending, but would close on being drawn up through the water ; there was also a small spring to the upper valve, which prevented it from opening when once shut. The four inside cases were separated from each other about a quarter of an inch all round, allowing the water to pass freely between them ; the fifth case was distant from the one next to it on the inside by about half an inch, which space was filled with tallow. The outer case was of wood an inch in thickness, and separated about an inch from the one next to it by a column of water. The size of the apparatus was two feet high, and ten inches diameter, having a weight of 72lbs. fastened to the bottom, and the end of a coil of two-inch rope to the top. Of this rope 779 fathoms were veered, then 390 of two and a half inch, and then 266 of three inch, making in all 1435 fathoms veered overboard. A 32lb. shot was attached to every 200 fathoms, and the whole was run out in twenty-two minutes. It was allowed to remain twelve minutes before the hauling in was commenced, that the whole might have time to sink ;

and it took an hour and twenty minutes to draw the thermometer to the surface, when it stood at 42°, the surface water being 73°. Latitude 3° 20′ S, and longitude 7° 39′ E.; date, September, 1816*. Capt. Wauchope is of opinion that the thermometer must have sunk about 1300 fathoms, provided there was no curve in the rope, as the ship's drift was about five knots in twenty-four hours.

Both experiments, therefore, concur in assigning a depth of 1200 or 1300 fathoms as the term of the augmentation, occasioned by external influences within the tropics, of the temperature of the sea water above that of its greatest density.

In a previous experiment of the same kind, which Captain Wauchope made in latitude 10° N., longitude 25° W., the quantity of rope veered was 966 fathoms, the temperature of the surface water was 80°, and the enclosed thermometer shewed 51°; corresponding to a diminution of temperature averaging one degree in about 29 fathoms, being very nearly the same ratio as appeared by the experiment in the Caribbean Sea.

* From the geographical position, and the temperature of the surface water, Capt. Wauchope was in the equatorial current near its commencment. In his case the surface water was thus accidentally colder than is due to the parallel, whilst in mine it was warmer; the accidents being in both cases the effect of currents.

The Storm of 1703.

Sir.—Agreeably to your request, in the last number of the Magazine, I beg to lay before your readers a compendious account of the great storm of 1703, extracted from the London Institution copy of the "City Remembrancer," vol. II., anno 1769.

After a general discussion of the causes of winds, and the antique opinion, of Britain being more subject than other countries to storms, we find an account of the storms in the years 1095, when the wind elevated some of the beams of Bow church so high in the air that they were driven 23 (?) feet deep into the ground by the fall; in 1362, 1566, 1607, great inundations; 1626, waterspouts at Lambeth; 1658, 1661, very terrific; 1665, when the sea suddenly retired from Copenhagen, leaving the harbour dry, and returning next morning to a greater height than ever before known; 1674, 1675, 1682, (Sicily).

The great storm of 1703 passsed over England, France, Germany, the Baltic, Sweden, Finland, Muscovy, and Tartary, to the Northern Ocean. The wind blew tremendously before the proper storm, so that the ships did not stir for a fortnight: 17 foundered; some were driven back to Portsmouth, Falmouth, and Ireland, from 150 leagues distance. Homeward-bound ships 500 leagues from England, were hurried homeward before the extremity of the storm: hence the sea became comparatively clear of shipping. The Russian fleet of 100 sail were dispersed on the eastern coast, 3 foundering; some of a 400-collier fleet were lost; 80 sail lay in the Humber, 400 at Yarmouth, 19 large ones at

Gravesend, 180 in the Downs, 300 at Portsmouth, 80 homeward-bound at Kinsale, 20 ditto at Bristol. 180 ships of war were off Holland. The "Paris Gazetteer" supposes England lost 30,000 men, and 300 ships.

Though blowing hard from November 12 to November 26, no fears were entertained until the 24th, A.M. On November 26th 10h. A.M., the barometer began to sink lower than ever; at 12 P.M. it commenced increasing till 5h., at its maximum until 6½ hrs. All the vessels in the river, except four, were stranded. It was just new moon, and the Spring tide at 4h. The wind abated greatly at 8 h. The wind was S.W. on the 26th, until 2 hr.; it veered then to S.S.W., to W., and about 6 h. to W.b.N.; the more northward it shifted, the harder it blew. At 7 h. it shifted to S., and then abated.

Many thought they felt earthquake shocks, and heard thunder: many meteors were visible in the country. A town in Norfolk was almost burnt. A prodigious tide followed off England, being 6 to 8 feet higher than ever before known.

On the 27th, at 3 P.M. the wind increased; at 4 h. it became very violent, with thunder and rain, going off in 15 min. This sort of weather occurred on the 28th, 29th, and 30th; blowing on the 30th at night with great fury, damaging more than the 26th. The wind continued until Dec. 1st, 1 P.M., when it ceased.

November 24 was a calm fine day, till 4 P.M., when it began to be cloudy; the wind rose suddenly, and in 30 min. it blew a storm. By 4 P.M. December 1st, there was not a breath of wind. The waters which fell in the storm were brackish. At Cranbrook, 16 miles from the sea, the grass became so salt, that the cattle would not eat it for several days. This saltiness was experienced by a physician 20 miles from the sea. (Reference to Lauwenhæk *Phil. Trans.*, 1704.) The Portsmouth people complained of sulphureous fumes.

On the 26th, at 4 P.M., a waterspout was observed in Berkshire. Tiles rose from 21s. to £6 per thousand; from 50s. to £10 for pantiles; bricklayer's wages rose to 5s. per day. Several buildings were covered with deal boards for years. Of trees, 70 fell in Moorfields; 100 in St. James's Park; 200 at Sir G. Whitmore's; 21 persons were killed on shore; 19 on the river; and 200 wounded. London bridge and the houses thereon were scarcely damaged, possibly owing to the indraft of the arches. The wind blew from S.W. to N.W., and if a building stood N. and S., the east side would be untiled, and the west untouched. The weather proved fair and temperate for a month.

Although no Deal custom-house men would succour the stranded seamen, yet Mr. Thomas Powell, mayor of Deal, successfully offered 5s. per head for all men the people would save. He took away the custom's boats by force, and particularly from those who had got them for the sake of booty; thus rescuing 200 men. Mr. Powell buried those who died from their fatigues, and gave money and passes to the survivors, at his own expense, the agent not disbursing one penny.

There were lost 500 London wherries, 60 barges drove foul of the bridge, 60 thence to Hammersmith were staved, The storm was not so violent in the north, so that many colliers escaped. Twenty-five

ships were lost in the Dunkirk Roads. The "Association" driven from the Downs, (24th Nov.), to Gottenburgh, (11th Dec.)

The following is the damage done to the Royal Navy :—

Northumberland . .	70 guns,	253 men,	253 lost.
Restoration . . .	70 —	386 —	286 —
Stirling Castle . .	70 —	349 —	175 —
Resolution . . .	70 —	211 —	— —
Reserve	54 —	258 —	242 —
Mary	54 —	273 —	272 —
Vigo	54 —	212 —	4 —
Newcastle . . .	46 —	233 —	210 —
Mortar	12 —	59 —	— —
Portsmouth . . .	4 —	44 —	44 —
Eagle	10 —	42 —	— —
Canterbury . . .	8 —	31 —	25 —

Total 12 ships,—2351 men,—Lost 1691 men.

Dr. Derham's Meteorological Observations, are in *Phil. Trans.* No. 289, p. 1530.

Then follow sundry remarkable deliverances, and accounts of the storm at Jamaica, Aug. 28, 1722; in England, Jan. 1735; in Scotland, Jan. 14, 1739; also those in 1741-49-52-56-57-60-61-63-64-66 (August, West Indies). This was so dry a year in Germany, that a rock in the Neckar was bare, with the epoch 1476 cut in it, four inches below which is now engraved 1766. On Nov. 14, 1766, a great storm burst over Cette, in France; on Jan. 3, 1767, at Edinburgh, with meteors; on the 4th, at Whitby, (wind N.E.); the next day at Margate, (wind N.W.); and at Newcastle, on the 10th. The last one recorded was on Oct. 25, 1768, at Cuba.

The work from which these *running extracts* are taken, contains a detailed account of the plagues, especially that of 1665, and also of the great fire in 1666, all purporting to have been compiled from the papers of the late Dr. Harvey, H.M. physician to the Tower.

I am, &c.

J. M. Drach.

To the Editor, &c.—April 8, 1845.

The Steam Navy of Great Britain.

No department of the Admiralty has occupied so much attention of the Board, nor has undergone so many improvements, or received so many additions, as that of the Steam Navy since their accession to office. Take, for instance, the amount of horse-power in 1841 and 1844, and it will be seen that the present Admiralty have almost doubled it :—

	Sept., 1841.	*July*, 1844.
In Commission	9,329 ...	13,941
In Ordinary	2,565 ...	3,167
Building	1,897 ...	9,526
	13,791	26,634

In many ships the Admiralty have very much increased the horse-power, and by improvements have rendered them much more effective. Those formerly classed as frigates they have properly named sloops, and have given the title of frigates to steamers more worthy of the name. The following is a list, with the amount of horse-power, of those actually afloat ;—

Frigates.—Terrible 800 horse-power, Retribution 800, Penelope 650, Sampson 450, Gladiator, 430, Firebrand 430, Vulture 430, Scourge 420, Cyclops 320.

Total, 4730 horse-power.

Sloops, Transports, Packets, &c.—Eclair 350 horse-power, Devastation 350, Gorgon 320, Geyser 320, Medina 313, Medusa 313, Merlin 313, Urgent 284, Cormorant 280, Growler 280, Spiteful 280, Stromboli 280, Driver 280, Styx 280, Thunderbolt 280, Vesuvius 280, Virago 280, Vixen 280, Hecate 240, Hecla 240, Firefly 200, Hermes 220, Hydra 220, Rhadamanthus 220, Medea 220, Salamander 220, Phœnix 220, Janus 200, Rattler 200, Dee 200, Polyphemus 200, Prometheus 200, Alecto 200, Ardent 200, Cherokee 200, Lucifer 190, Volcano 190, Shearwater 160, Acheron 160, Kite 150, Prospero 144, Tartarus 134, Gleaner 130, Porcupine 130, Carron 120, Otter 120, Flamer 120, Blazer 120, Jackall 120, Lizard 120, Avon 100, Adder 100, Alban 100, Columbine 100, Confiance 100, Cuckoo 100, Dasher 100, Doterel 100, Echo 100, Lightning 100, Locust 100, Meteor 100, Pluto 100, Sydenham 1S0, Jasper 100, Sprightly 100, Zephyr 100, African 90, Dover 90, Dwarf 90, Minos 90, Widgeon 90, Montreal 80, Monkey 80, Advice 80, Pigmy 80, Comet 80, Fearless 76, Wildfire 75, Wilberforce 70, Albert 70, Swallow 70, Ariel 70, Beaver 62, Charon 60, Redwing 60, Mohawk 60, Asp 50, Princess Alice 50, Myrtle 50, Niger 35, Experiment 25, Rocket 20, Ruby 20, Bee 10.

Yachts.—Victoria and Albert 400, Black Eagle 260.

Thus we have actually afloat 107 steam-vessels of all classes, with a power exceeding that of 20,000 horses. Again, in the building department, there has been no want of energy as to the improvement of the vessels, both in size and power: for engines to the amount of 10,000-horse-power are ordered, and engines and vessels for more than one-half of this power are nearly ready.—*Morning Herald.*

Lighthouses.—It appears from a Return made by the Corporation of the Trinity-house of Deptford Strond, of the receipts and application of all moneys received as tolls for lighthouses, &c. in the year ending 31st Dec., 1843, that the gross total amount of light duties received during the above period amounted to the sum of 149,554*l.*; and the commissions on collection to 5893*l.*; leaving a net revenue of 143,868*l.* The charges of maintenance amounted to 86,172*l.*, and the amount of surplus remaining on hand, 57,695*l.* The net revenue arising from the duties collected to the offices of buoyage and beaconage seems to have amounted to 13,837*l.*, and the charge of collection to 9,332*l.*, leaving a surplus of about 4,566*l.* The net revenue of the lighthouses transferred a purchase under the said Act of Parliament, amounted to 88,903*l.*, and the charges of maintenance of 19,312*l.*, leaving a surplus of 71,375*l.*

The Report of alterations and improvements shows that in the year already mentioned, the light-vessel at the eastern end of the Cockle-gat, at the northern entrance into Yarmouth-roads was provided and brought into operation in compliance with the general desire and solicitation of the trade. This vessel exhibits a revolving bright light, shown by Argand lamps and parabolic reflectors, and was first exhibited on the night of 20th

Dec., 1843. As regards alterations, it appears that at the lighthouse on the Smalls Rock, off the coast of Pembrokeshire, and at the South Foreland High Lighthouse, on the coast of Kent, the lights were improved and strengthened; in the former by the introduction of additional Argand lamps and parabolic reflectors, producing a more uniform distribution of light; and at the latter station (where a new lighthouse was erected), by the substitution of a complete "cata-dioptric" apparatus for a fixed light of the first order, instead of the lamps and reflectors previously in use in the old tower. At the lighthouse at Gibraltar, an addition was made to the "cata-dioptric" apparatus for the purpose of extending the range of the light into Algesiras Bay. The improved mode of exhibiting the lights on board light-vessels, by the introduction of Argand lamps and parabolic reflectors, was adopted instead of the former less effective apparatus, on board the light-vessel at the north-eastern end of the Ship-wash sand, off the coast of Suffolk; and the light-vessel off Bembridge-ledge, at the eastern side of the Isle of Wight. A conical iron beacon was completed on the Rundlestone Rock, off Cornwall, which rock is covered at high-water.

A Sailor's Advice to his Son.

(Continued from page 200.)

Letter V.

Demeanour in general.—Captain, Officers, Messmates, and Seamen.

It will be the first object of whoever accompanies you to your ship, to introduce you to your Captain.

To his protection you must consider yourself transferred, as to a second father; and so long as you continue to deserve it, I sincerley hope it will be kindly extended to you. You will perceive that he is looked up to as the head of all around him. You will see officers of long experience and high reputation, who have faithfully served their country many years, punctually obeying him, and executing his orders with spirit and alacrity; and you will find them constantly observing with respectful deference and attention, whatever he may think necessary to direct for the benefit of the public service. It will, therefore, be evident to you, that as a little boy who has everything to learn, you must also study to respect and obey him implicitly; not from a desire to ingratiate yourself, or to court his peculiar favour, but because it is your duty to obey him, in order to support that station, the obligations of which it will be incumbent on you to fulfil. At the same time, justly to deserve his approbation by your merit and general good conduct, will be a sure satisfaction to yourself, and may, by securing his esteem, considerably promote your future advancement in life.

With the Lieutenants and officers of their mess, your intercourse, both of duty and society will be more immediate. From the former, especially the First Lieutenant, you will derive all the advantages and indulgences you may deserve. He is the official organ of the Captain's orders, the authorized executive channel through which every regulation flows, the watchful observer of all around him, the rewarder of merit, the corrector of negligence, disobedience, and depravity, the friend of the good, and the terror of the bad.

From the First Lieutenant you will continually receive orders, perhaps frequently delivered in a hurried and inarticulate way; but you must accustom yourself to catch the meaning from the usual manner of the Lieute-

nant in similar cases, and to comprehend them without repetition; and should it be necessary to request explanation, do it promptly and respectfully; never exhibit the slightest symptoms of indifference, petulance, or carelessness in the execution of your duty; if you do, the unfavourable opinion of your superiors will assuredly follow.

With your companions always maintain a frank, cheerful, and independent openness of demeanour. Avoid carefully every description of cabal, party, wrangling, idleness, intoxication, immorality, or profaneness. Without improper familiarity, be affable, courteous, and disposed to do kind offices to them all; but never engage yourself to any assistance of moment, either of a pecuniary or any other nature, without first considering whether you possess the means of fulfilling it, and if you do, whether you do right in assisting them or not.

Never enter into any conversation reflecting on your superiors. Such conversation, (independent of its rendering you, by the Articles of War, liable to suffer death), is both unprofitable and dangerous, calculated to produce dissatisfaction, to sour the best of tempers, to substitute discontent and mischief in the place of harmony and cordiality. Should you ever be accidentally present at the discussion of such topics, if it be possible, immediately withdraw; or, if you cannot absent yourself, nor conscientiously defend your superiors, *be silent.*

To the seamen, the only class subordinate to you, appropriate behaviour requires to be very particularly enjoined. From your superiors you will meet with the tone of manner which restrains and governs you, but with inferiors you must stand upon some degree of self-importance.

In the first place, you must consider that you are only a little boy, having everything to learn, for a time merely repeating orders, the meaning of which you scarcely comprehend.

You must also remember, that many of the hardy veterans, to whom you may be directed to address yourself, have served their country in battles and in tempests for several successive years; and, that a true British seaman, of unblemished conduct, though undecorated by external marks of rank, is in reality, one of the most valuable characters belonging to your country. He bears, with patience and cheerfulness, peril, privation, and hardship, at which the luxurious landsman would shudder with dismay. Amid perpetual watching, disease, and danger, toil, hunger, and thirst! alike to him are the midnight surges of a leeward coast, or the playful ripple of the gentle gale. His duty is his sole delight. Patient, orderly, and submissive, he bears the fury of the raging storm, and dares the boldest efforts of his country's foe. His swarthy cheek, and hollow eye, indicate exposure to every clime, and his weather-beaten frame at length yields to their effects. He sinks into oblivion, unknown to that country which he has dearly aided to defend. He is committed to the deep, and unfathomable waters are his tomb!—but his merits are recorded elsewhere. Never, then, approach such a person without recollecting what is due to him. Whatever orders you have to give to him, repeat them in an affable, condescending tone. In his turn he will esteem and respect you; he will feel both pride and pleasure in teaching you how to knot and splice, and in giving you all the information he can, on various parts of the rigging. But whilst you are receiving this return, you must never forget that you belong to the quarter-deck; and take care that you never descend to, nor allow the smallest undue familiarity.

I wish you to habituate yourself to regard the seamen as humble and dependent friends, by their situation excluded from all the advantages of knowledge and education which you possess; but, who, in the moment of danger are the foremost to rush forward amidst the havoc of artillery, or the peril of shipwreck; and, for a good officer, will expose themselves to protect

his person, to shield his honour, and to exalt his name in the records of his country's glory. Nor must you be led away with an idea that they are universally men of dissolute or extravagant habits. You will find many of them discerning, temperate, and sagacious; uniformly regular and exemplary in their conduct, and who, as far as their information permits would scorn to transgress their duty in a moral or a religious sense, with as much firmness as the most high-minded and well-informed officer; while many instances of their filial piety, in allotting a considerable part of their pay to their parents, will give you a high opinion of their generosity and regard to natural affection. Never then address them with contumelious epithets, nor in any way abuse your authority over them. True it may be that the foregoing is the brighter side of their character. They have naturally many imperfections, but these are a pledge between every honourable officer and his country, that he will govern them with care and protecting humanity; that he will afford them the constant guidance of his superior intelligence and example, and that he will never exercise the sterner authorities of discipline, but with undeviating regard to justice, and to mercy. It is his duty to feel for, and to supply the deficiencies of his men, and to recollect that many of their faults and their failings are the inevitable result of ignorance and condition of life; and to consider, if their prejudices be not in any material instances derogatory to the good of the service, that they should meet with a benevolent toleration; although, at the same time, every real encroachment of disrespect, or disobedience, should be visited with prompt correction.

In fine, to all classes endeavour to maintain a demeanour full of mildness, suavity, and conciliation; and you will be beloved and respected. You will be obeyed from affection and confidence, and in trying moments, you will feel a security of command which will triumph over apparently insurmountable difficulties.

By avoiding harsh, passionate, and flippant behaviour, you will ensure the respect of superiors, besides the tranquil approbation of your own mind. A ready confidence in your own powers will, in due time develope itself; and when you attain the rank of Captain be communicative to all under you; and, should opportunity offer, you will go into battle with a superior foe so serene, so firm, and so collected, that you will not fail to obtain as much honour and distinction as can be reasonably aspired to by the most ardent mind.

(*To be continued.*)

Admiralty Surveys in Progress.*

(*Page 17, of Navy Estimates.*)

HOME SURVEYS.

Portsmouth.—The Owers Shoals, St. Helen's Spithead, and Portsmouth Harbour, having been completed, this party is now proceeding with the Southampton Water, the Solent, and the Needles. Under the direction of Commander Sheringham, in the *Fearless*, steam vessel.

The Downs.—The survey of the river Thames having been completed,

* We have amended several errors which we have found in this statement as it has appeared in the Public Prints.—Ed. N. M.

from London Bridge to Ramsgate, this party is now employed in examining the Brake and other sands in the Downs, which have very considerably changed their positions. Under the direction of Capt. Bullock, in *Porcupine*, steam-vessel.

North Sea.—This party is now employed in surveying the Stour, Orwell, Deben, and other navigable rivers in the east coast of England, and in proceeding gradually with the banks which occupy the North Sea; 6000 square miles of which have been already accurately examined and sounded. Under the direction of Capt. Washington, in *Blazer*, steam-vessel.

Scotland (North Coast).—These Officers having partly completed the north coast of Great Britain, are continuing their operations round Cape Wrath. Under the direction of Commander Otter, in *Sparrow*.

Orkneys.—This Party is still engaged in the difficult and laborious survey of this boisterous group of islands. Under the direction of Master George Thomas, in *Mastiff*.

Scotland (West Coast).—This party having finished the survey of the Firth of Clyde, will now undertake the remainder of the coast, to the Mull of Cantire. Under the direction of Commander Robinson, in *Shearwater*, steam-vessel.

Irish Channel.—The northern part of this important survey has been already executed, and is in the engraver's hands; the southern half will now occupy this party. Under the direction of Capt. Beechey, in *Firefly*, steam-vessel.

Ireland (East Coast).—The coast from Dublin Bay to Wexford, with the shoals off Wicklow, having been already surveyed, the party is now at work on the Arklow Shoals and the shore towards Waterford. Under the direction of Commander Frazer, in *Lucifer*, steam vessel.

Ireland (West Coast).—This party, in hired vessels and boats, is employed in surveying Galway Bay. Under the direction of Commander Bedford.

Ireland (South-West Coast).—This party having completed the survey of the Shannon, as far up as Limerick, is now engaged in the examination of Bantry Bay. Under the direction of Commander Wolfe, in *Tartarus*, steam-vessel.

Lough Corrib.—This party is employed in the navigable lakes of Corrib and Mask, in the county of Galway. Under the direction of Lieutenant Beechey, R.N.

FOREIGN SURVEYS.

Mediterranean.—The opposite shores of the Archipelago having been nearly completed, these parties are now about the intermediate islands. Under the direction of Commander Graves, in *Beacon*; Commander Brock, in *Bonetta*.

St. Lawrence.—This party having completed the survey of the River and Gulf of St. Lawrence, from Montreal to the island of Anticosti, as well as the Strait of Belle Isle, is now employed on the southern shores of the Gulf, and round Prince Edward's Island. Under the direction of Capt. Bayfield, in *Gulnare*, hired schooner.

Gulf of Fundy.—The survey of places on the shores of this large and dangerous arm of the sea has been executed, as well as upwards of 100 miles of the river St. John; and this party is now uniting these partial surveys in a general chart, as well as endeavouring to determine the set of the prodigious tides there, which rise upwards of 60 feet. Under the direction of Capt. W. F. W. Owen, in *Columbia*, steam-vessel; Lieut. Shortland, R.N.

West Indies.—These parties have nearly finished the Mosquito and Honduras Gulfs, as well as the Intricate channels across the Bahama

Banks, have now undertaken the Gulf of Campeche, and the shores of the Gulf of Mexico. Under the direction of Com. E. Barnett, in *Thunder*; Lieut. Lawrence, in H.M. schooner *Lark*.

Falkland Islands.—The survey of these islands, which contain some of the finest harbours in the world, is now nearly completed. Under the direction of Commander Sullivan, in H.M.S. *Philomel*.

China.—These parties are employed in determining the position of the various dangers on the coast of China, and in examining the approaches to the several commercial ports, and the China Sea, access to which was conceded by the late treaty. Under the direction of Capt. Sir E. Belcher, C.B., in *Samarang*, and Capt. Collinson, C.B., in *Plover*.

Australia.—These parties are engaged in an extensive survey of the long line of reefs lying to the north-east of Australia, and intervening between the Pacific Ocean and Torres Strait, which is the only direct communication with India. Under the direction of Capt. H. P. Blackwood, in *Fly*, and Lieut. Yule, in *Bramble*.

Western Coast of America.—These parties will take up the survey at Guayaquil, to which place it has been extended from Cape Horn, and published in 16 sheets: and they will continue it to the northward, along the coasts of Granada, Guatemala, Mexico, and California, of which long interval there is but little accurately known. Under the direction of Capt. Kellet, C.B., in *Herald*, and Lieut. Wood, in *Pandora*.

Western Coast of Africa.—The west coast of England from Denbighshire to Cumberland, including the navigation of Chester, Liverpool, Fleetwood, Morecombe Bay, Peel Harbour, the Duddon, Ravenglass, Whitehaven, Harrington, and Maryport—having been completed by Commander Denham, R.N., F.R.S., this officer is preparing to proceed and complete the charts of the western coast of Africa.

Rodger's Anchors.

A recent number of the *Shipping and Mercantile Gazette* contains the following letters on the good qualities of Lieut. Rodger's Small Palmed Anchors. Having frequently recorded similar testimonials, we consider it as no more than justice to an important invention to preserve these in our pages as containing the opinions of two officers, whose high reputation in Her Majesty's Navy, gives a degree of importance to their decisions, that must always entitle them to consideration and respect.

Charlotte Street, Fitzroy Square, Jan. 6, 1845.

My Dear Sir,—I have no hesitation whatever in complying with your request, to give you my opinion respecting the working qualities of your Patent Anchor.

I saw it tried against other anchors in a series of trials on five occasions, on four of which I was ordered, with other officers, by the Commanders-in-Chief at Portsmouth and at Malta, to superintend for the purpose of reporting thereon. And I am of opinion, that in the very essential qualities, (especially in narrow and crowded anchorages), of readily canting, biting the ground, and holding, your anchor was very superior.

My attention has long been drawn to the subject of the qualities, form, and strength of anchors, from having witnessed, in my position in the service, so many failures; and in following up my inquiries and observations respecting the length, form, and cross sections of shanks of equal areas, the angle, length, and form of arm, surface and form of palm, the weight, proportion, and fitting of stocks, your recently improved anchors, and especially the wood stocks, come nearer to my idea of strength than any I have examined of the different models in our dockyards. And I am in a great measure

confirmed in this by examining and inquiring minutely into the circumstances attending a severe trial of the strength of one of your anchors, in an American line-of-packet ship, of 821 tons, now in the St. Catherine Docks.

A subject so important demands the closest investigation, and those who undertake this for the benefit of the public, at the expense of their time and private resources, undoubtedly deserve due encouragement from the highest sources, when they have proved that they have so far succeeded. I am of opinion that great improvement is still necessary in our ground tackle, especially as respects proportioning chain-cables and anchors to the tonnage and form of the larger class of ships of war.

I am, &c.

(Signed) WM. MILLER, Master, R.N.
Late Master of the Mediterranean Fleet.

To Lieut. Rodger, R.N.

Bovisand, March 29, 1845.

DEAR SIR,—You wrote me a long time since to know "if I had recovered the Hydra's anchor, and by what means."

The Hydra parted her chain-cable a few links from the anchor, on the 4th of November, 1843, and every means were adopted for recovering it, by "sweeping" the ground, and by dragging creepers along the mud, but without success.

The fact is that the anchor had dived completely under the mud, leaving the *surface* of the anchorage clear of all obstruction.

This afternoon, however, the anchor made its appearance, and has been sent up to the Dockyard, "safe and sound."

The Espiegle's bower anchor hooked it, and brought it up to the surface.

I think highly of *your* anchors for their holding properties, and their propensities *for diving into and adhering to the bottom!* They bring ships up with a shorter scope of cable, and of course will ride ships with less scope than is necessary with the old anchors, or even with the improved anchors of another form. They will force themselves into notice.

I am, &c.,

(Signed) WM. WALKER,
Queen's Harbour-Master, Plymouth.

To Lieut. Wm. Rodger, R.N.

The experience of Commander Ommaney in the *Vesuvius* fully corroborates the foregoing.

1, *Upper Wimpole Street, April* 14, 1845.

SIR.—I feel much pleasure in conveying to your favourable testimony of the service of one of your Anchors, which H.M. steam vessel *Vesuvius*, was supplied with.

During the period of my command, for upwards of three years, it was always used as the working anchor, in preference to the other Bower, of the ordinary construction.

It was frequently tested in gales of wind, and on other occasions of heavy strains, when it always held well.

I found it possessed the advantage of "tripping easily," and from its compact form, more quickly stowed; and I have also to state in its favour, that it was of considerably less weight, than the establishment for that class of steamer.—I can strongly recommend it, and would be glad to do so.

I am, &c.

(Signed) ERASMUS OMMANNEY,
Commander R.N.

To Lieut. Rodger, R.N.

[illegible]

Trinity House, London, March 28, 1845.

RELATIVE LIGHT, PLYMOUTH SOUND.—Notice is hereby given, That the Relative Light in the Entrance of Plymouth Sound, has been exhibited [illegible] from the said Light-[illegible] Vessels are to observe, that vessels [illegible] Western Passage, should not anchor [illegible] Light.

By Order,

——— J. HERBERT, *Secretary.*

Ordnance Office, April 1, 1845.

FLOATING LIGHT AT SIMONS BAY, CAPE OF GOOD HOPE.—*Corpus* [illegible] Lords having directed a Floating Light to [illegible] hereby given, That a Light Vessel [illegible] exhibiting a Revolving Light at an elevation of 37 feet above [illegible] moored near the Roman Rocks in 7½ fathoms, [illegible]

[illegible] Roman Rock	South, 1 Cable's length.
[illegible] White Rock	S.S.E. ¾ miles.
[illegible] Simons	E. by S. ¾ miles.
[illegible] Point	S. by W. ¾ miles.

[illegible] during the day, shew a Red Flag (or perhaps a [illegible]

It [illegible] Lieut. R.N.L.S. *Winchester*, has drawn up the following [illegible]

When [illegible] Cape of Good Hope from the westward, [illegible] Light will open near of Miller Point on the bearing of [illegible] Simons Bay, between the Whittle [illegible] Light should not be brought to the west- [illegible] with the light and about Miller [illegible] to the westward of the Whittle; nor should the [illegible] near to the eastward of north, on account [illegible]

[illegible] to the eastward of the Whittle, the Light [illegible] N.N.W. ½ W. in order to avoid that [illegible] W. ½ W., so as to give a sufficient berth [illegible] whatever of those channels [illegible] certain of being within [illegible]

[illegible] near N.b.W., which will [illegible] continued till within a mile of [illegible] opened on the port bow, [illegible] distance. When the Light [illegible] of the anchorage, and bring [illegible]

[illegible] it will be observed [illegible] between the Cape and the Light; [illegible] near N.W.b.N., and [illegible]

[illegible] connected with Simons [illegible] between the Roman Rock and Noahs [illegible] position of the [illegible] passage of ships at night should [illegible] Vessel, and sail round her to the north-

SHOAL ON THE BANKS OF NEWFOUNDLAND.—" A shoal with only 21 feet water upon it was discovered by Jesse Ryder, Master of the Fishing schooner Bethel, (belonging to Province Town, Massachusets), on the Grand Bank of Newfoundland, in lat. 46° 30′, having observed on the shoal and saw distinctly, it being a rock of about 100 or 200 feet surface, supposes it to be about 50 miles east of the Virgin Rocks. Shoal bears from Nine Fathom Bank S.b.W. by compass about 1½ miles, discovered it accidentally while searching for the Nine Fathom Bank, to fish on. Am certain it was not any part of the Virgins; for I afterwards saw them, and from my experience of the different fishing grounds, know this shoal to exist.

This information I obtained from Mr. Ryder himself, and took a sketch from one that he had in the American Consul's office at this place.

Halifax, Feb. 1845.

WALTER DOUGLAS."

A letter containing the foregoing has been transmitted to the Admiralty, by Admiral Sir Charles Adam; having been sent to him by Mr. Cunard, of Halifax, who received it from Mr. Walter Douglas, Commander of the Unicorn steam packet.

Hydrographic Office, Admiralty, April 1, 1845.

TORRES STRAIT, BEACON ON THE BARRIER REEF.—Her Majesty's Government having directed that a lofty and substantial Beacon of Stone should be built on one of the rocks of the Great Barrier Reef, for the guidance of vessels bound through Torres Strait; and Capt. Blackwood, of H.M.S. *Fly*, having selected Raine Island for that purpose, and having reported that the Beacon had been completed, the following notice of it is now published for the benefit of seamen.

The Beacon is of a circular form, 30 feet in diameter at the base, and 27 feet at the top; the building is 64 feet in height, and, at low-water, it stands 75 feet above the level of the sea. It is painted with alternate red and white vertical stripes; and, in clear weather, it is visible from a ship's deck at the distance of eight or nine miles, but from the mast-head, at twelve or thirteen miles. Its lat. is 11° 35′ S. and long. 114° 6′ E. of Greenwich.

Raine Island is in the middle of an opening, of about eight miles in breadth, through the outer Barrier Reef; no bottom is found with 125 fathoms in any part of this opening, nor close up to the island, which is a low and narrow coral rock, about a quarter of a mile in length. Though without water, it carries a coarse green vegetation, while Pandora Islet, which is eight miles farther to the northward in lat. 11° 27′ S. is a bare bank of sand.

The extreme points of the reefswhich form the above opening bear from the Beacon N.N.E. ½ E. and S.S.E. ½ E. by compass. The time of high water at full and change is 10 o'clock; the rise at ordinary springs about 10 feet; and the strength of the tide sometimes amounts to two knots. The flood

comes in from the eastward, and there is a general current of about a knot, setting to the northward, (or to leeward), along the face of the reef. The variation of the compass is 4° 30′ E.

A vessel coming from the southward, and intending to penetrate the Barrier by Raine Island, should be pretty certain of her latitude; and when running in to the westward towards the reefs, she should so shape her course as to make the Beacon well on the starboard bow, in order to allow for the northerly current.

When the Beacon is clearly made out, the island will soon be seen, and may be passed on either hand, as both channels are 2½ miles wide. The southern channel will be the most convenient, but the reef, which projects a good mile from the S.E. end of the island, must be avoided.

When the Island is passed, a S.W.b.W. ½ W. course by compass will lead through a wide opening in the second line of reefs, and the Hardy Islands will soon be seen, as their distance from Raine Island is but 40 miles. Some scattered coral heads will, however, have to be passed, for which a good look out should be kept; and it is recommended to all vessels, which have to run to the westward among these coral patches, to do so in the morning, before the sun passes much to the westward of the meridian, as the patches may then be distinctly seen from the mast-head, or from the fore-yard, at both of which places a careful look-out-man should be stationed.

Trinity House, London, April 7, 1845.

Deal Bank.—The depth of water on the Northern and Southern parts of Deal Bank having so considerably increased as to render the Buoys at those Stations no longer necessary, Notice thereof is hereby given,—and that the said Buoys have accordingly been taken away; and in lieu thereof, one Red Buoy, marked "Deal Bank," has been placed upon a projecting part of that Sand, in 6 fathoms at low water Spring Tides, and with the following marks and compass bearings, viz.—

Upper Deal Mill, in line with the South End of Deal Barracks	W ¾ S.
East Hill Semaphore, in line with the North End of the Old Stairs Bay South Cliff	S.W.

By Order,
J. Herbert, *Secretary.*

Trinity House, London, April 10, 1845.

Yarmouth Roads.—Notice is hereby given, That in pursuance of the intention expressed in the advertisement from this House, dated the 6th ultimo, the Light Vessel in the Cockle Gatway, has been moved one-half mile S.W.b.W ½ W. from her former position, and now lies in 8 fathoms at low water Spring Tides, with the following marks and compass bearings, viz.—

Winterton Church Tower, in line with the North Side of Winterton Light House	N.W.
Gorleston Church Tower, in line with the middle of the New Houses South of Yarmouth Jetty ...	S.W. ½ S.
Newarp Light Vessel	N.E.b.E. ½ E.
Cockle Fairway Buoy	N.N.W. ½ W.
Cockle Spit Buoy	N.W.b.W.
Outer Barber Buoy	S.W.b.W.
North Scroby Buoy	S.b.W. ½ W.
North Cross Sand Buoy	S.E.b.E. ½ E.

The alteration of the colour of the Beacon Buoy at the North End of the Scroby Sand, as farther notified in the said advertisement dated the 6th *ultimo*, has also been effected, and the colour of that Buoy is *now Red.*

Notice is hereby also given, That the Red Buoy at the North End of the Newarp Sand, has been removed one-half mile farther northward, and now lies in about 6 fathoms at low water Spring Tides, with the Newarp Light Vessel bearing E. ½ N. distant about ¾ths of a mile.

By Order,
J. Herbert, *Secretary.*

Hydrographic Office, April 14, 1845.

Light on Falsterbo Reef.—The Swedish Government has given notice that it is intended that the Light Vessel which was removed for the Winter months from her station on Falsterbo Reef in October last, will be replaced in the month of July next, and that the necessary information concerning her position will be duly published.

Mr. Bush's Light on the Goodwin Sands.—The following letter from Mr. Bush is amusing enough in its way. Whether this gentleman succeeds, or not he evidently deserves it.

"I have the satisfaction to inform you that I and my workmen have taken possession of our residence in the round house built on the summit of the column for my new light on the Goodwin; and it is my intention to reside here until I have succeeded in ascertaining strata beneath the sand, should the weather continue favourable. That being done, I shall proceed to complete the lighthouse, by fixing the lantern.

"I think I may fairly state that another inhabited island is now added to Her Majesty's dominions, in the bowels of which are imbedded many treasures, and which will form a nucleus for batteries and fortifications, as for a harbour of refuge in Trinity Bay, in the Downs; and, when completed, be the key of the British Channel, and thus form a second Gibraltar.

"As so many unfounded reports have been in circulation respecting this undertaking, I will thank you to send this informatiion to the London journals.

"I am, &c.
"William Bush.

"*To Richard Clay, Esq. at Lloyd's.*

"P. S.—I have commenced boring, to ascertain the substrata of the Goodwin, and at 50 feet beneath the platform have found nothing but hard sand, nearly as solid as the rock itself."

London Shoal.—I have this moment seen Capt. Close, of the ship Ellenborough, who is confident that the London Shoal off Point Poudy, and between the Armagon and Pulicat reef, marked *as doubtful, does exist;* as he distinctly saw breakers on the position assigned to the London Shoal. The Ellenborough rounded-to to sound abreast of the breakers, the lead-line got foul, and with a fresh breeze and strong current she drifted past before soundings could be got with any certainty. Capt. Close is of opinion, that this shoal is five miles off shore.

The Ellenborough arrived yesterday from Calcutta, and will sail this evening.

Yours, &c.
Madras, Jan. 14, 1845. C. Biden.

P.S. We are determined, with the sanction of Government, which cannot be doubted, to construct an iron-piled pier. A public meeting held on the 21st ultimo, tested public opinion as unanimous in favour of this grand project, and within one week after the subscription book was in circulation, every share was registered, and the capital £30,000 subscribed; the shareholders principally merchants, recommend an additional lack of rupees, for the purpose of

adding an indispensable auxiliary, viz. the floating breakwater, to protect the head of the pier, and for a solid and substantial abutment of granite; and parties are ready and willing to take the requisite number of supplemental shares. C. BIDEN.

CORAL REEF.—The following is the copy of a letter posted in the Underwriters' rooms at Liverpool, respecting a coral reef, discovered by Mr. Johnson, of the ship Tory :—

"*Singapore, Nov.* 20, 1844.

"Gentlemen,—I have to acquaint you, that I left Macao on the 15th of October, with a favourable wind. On the 18th instant heavy gales set in from the S.W., which continued for four days, and which drove us greatly to the east of our track. On the morning of the 22d, in lat. 7° 52′ N., long. 111° 25′ 45″ E., I remarked to the officers of the watch that we were close to a coral reef from the appearance of the water, and looking over the ship's side I saw the coral reef under her bottom; immediately put the helm hard up and wore ship. In the casts of the lead taken, found there were great overfalls, the soundings being in one instance 3 fathoms and in the next 20 fathoms. I could perceive the water breaking close to on one part of the reef where I suppose the soundings would be about 4 or 5 feet. An officer was sent to the masthead, and could perceive the reefs extending in a S.E., and N.W. direction about a mile and three-quarters; I did not wish to examine the reef more closely, as night was setting in. We were off soundings immediately after wearing ship. Had the ship been laden, she would undoubtedly have been lost; and the night previous we must have passed within 3 miles of this dangerous reef, which is not laid down in any of the charts, and at the time it was blowing very heavily, with severe squalls, which split all our sails then set. The reef must prove very dangerous to navigation, and I think it essential that it should be further examined. The reef bears from the Prince of Wales Bank E.b.S. ½ S.

"G. JOHNSON, *Commanding the ship Tory.*"

"*To the Liverpool Underwriters.*"

A LOST ROCK.—A well-known landmark in the St. Lawrence, called the "Old Woman,"—an isolated rock, about 60 feet high, and lying about a cable's length off Ship's Head or Cape Gaspé has disappeared. The base of the rock having been worn away by the action of the sea, it has fallen into deep water. See a sketch of this rock called the Flowerpot in a former volume.

COMMERCE AND NAVIGATION.—The Committee of Lloyd's have addressed a letter of thanks to Captain Sir John Marshall, R.N. for the great attention paid to their interests, and the mercantile community generally by him during the period of his command on the Cape of Good Hope station, by arrangements made at Ichabo for the preservation of the peace and the furtherance of trade otherwise at that island.

Sir John Marshall concludes in reply with "Long experience in the public service has taught me duly to appreciate the importance as well as to respect and admire the intelligence and honourable bearing of our shipowners and merchants." We may also add, that the attention of Sir John Marshall has not only been devoted to the interests of commerce, but also to those of navigation while at Ichabo, he having supplied us with a trigonometrical survey of the coast and island, which forms that anchorage, besides having made a complete triangulation of the reefs which surround Rodriguez, for which services, in our opinion, he is no less entitled to the thanks of Lloyd's, as well as to navigators generally.

SHARK.—Capt. Young, (I.N.) while at Kurrachee with troops in December last, found aground in the bay a blue spotted shark of the following extraordinary dimensions:—Extreme length 25ft. 8in., from fin to fin 12 feet, from eye to eye 6 feet. The mouth at the extremity of the head, with very small teeth like a file in millions. The jaw has been forwarded to the Bombay Museum.

WRECKS OF BRITISH SHIPPING.

Continued from p. 110.—cs. crew saved; cd. crew drowned.

VESSELS' NAMES.		BELONG TO.	MASTERS.	FROM	TO	WRECKED.	WHEN.
Alexander	60	Aberdeen	Deans	Aberdeen	Valparaiso	Hasbro Sd,	Mar. 20. cs
Alexander		———	Smith	Dundee	Newcastle	Fern Islands	Mar. 24. cs
Amethyst		Halifax N.S.	———	———	———	Crooked I.	Feb. 5. cs
Ann		Sunderland	Potter	Sunderland	London	Yarmouth	Jan. 26. cs
Ann		Ipswich	Woods	Shields	———	N. Rock	Jan. 31. cs
Bell	65	Plymouth	Curtis	———	———	Terceira	Mar. 10. cs
Belle Isle		Maryport	Huddart	———	Dublin	Strangford	Jan. 13. cs
Ben Hart		Quebec	Morton	———	———	Herradura	Oct. 3. cs
Blessing		N. Shields	Robinson	———	———	Flambro Hd.	Mar. 28. cs
Britannia		Scarborough	———	———	———	Pightle	Jan. 26. cs
Brunswick	70	Rye	Kerr	———	———	Flambro Hd.	Mar. 28.
Choice		Newcastle	Crass	Newcastle	London	Scroby Snd.	Jan. 27. cs
Coquette		Dublin	Donnan	Trinidad	———	Nova Scotia	Mar. 16
Cypress		———	Purdy	run down &	sunk by a	schooner	Mar.
Cyrus		———	Woller	Liverpool	Havana	Old Bah. Ch.	Feb. 1. 1d
Daphne	75	Blyth	———	———	———	Ichaboe	Nov. 23. cs
Donald		———	———	———	———	Carmen	Feb.
Duncan		St. John	———	Greenock	Savana	C. Sable	Feb. 7. cs
Eliza		Hull	Swan	Newcastle	Bordeaux	Gironde	Jan. 5. cd
Elizabeth		Scarborough	Bland	Middleboro'	London	Cross Sand	Jan. 27. cs
Elizabeth	80	Montrose	Sim	run foul of	and abandon	ed	Ap. 1. cs
Emerald		Belfast	Harrison	London	Aberdeen	Banrard S.	Feb. 7. cs
Endeavour		Boston	Boothby	———	Yarmouth	Orfordness	Mar. 13. cs
Enterprize		Liverpool	———	New Orleans	———	Bahamas	Mar. 18. cs
Finlator		London	Dunn	———	———	Horsey	Mar. 16.
Fortune	85	London	Wilson	London	St. John	Gr. Manan.	Feb. 15. cs
Fox		Inverness	———	———	———	Tynemouth	Mar. 30.
Glocester		———	Henderson	Patagonia	Falmouth	Off Brazil	Jan.
Harmony		Ramsey	Brenden	———	———	Enniskowen	Feb. 9. cd
Isabella		Hartlepool	———	———	———	Robin H.B.	Mar. 1. cs
Joan	90	Wemyss	Berwick	Newcastle	Bainsford	Holy Island	Mar. 14. cs
Jane		Shields	Ridley	Blyth	Filey	Redcar	Mar. 27.
James Ray		Nassau	———	Demerara	Nassau	Eletheria	Feb. 5.
John Knox		Liverpool	———	Bombay	London	Goodwin S.	Mar.
John and Mary		Belfast	———	sunk in	Saltoun	Bay	Mar. 31. 3d
John and Susan	95	Whitehaven	Merryman	Newry	———	Poolberg Lt.	Mar. 31.
Lady Jane		Dundee	Betts	Perth	London	Cunfleet	Mar. 8.
Lady Scott		———	Fuller	Cuba	Swansea	Castle I.	Dec. 14. cs
Lord Stewart		Seaham	Hunter	Seaham	London	Gunfleet	Mar. 10. cs
Lucy Ann		Bristol	Tripp	Ichaboe	———	Off Kinsale	Jan. 12. cs
Lucy	100	Dumfries	Anderson	Tarbert	Preston	Moker	Mar. 27. cd
Magnet		———	Lewis	———	———	N.Zealand	Oct. 12. cs
Margaret Cornelius		———	Crowley	Cork	Porthcawl	Off Bude	Jan. 27. cs
Manchester		———	Hall	Liverpool	Calcutta	W. Hoyle	Jan. 26. cs
Martin		———	Calman	———	———	Gun Bank	Feb. 10. cd
Prince Albert		Bantry	———	Liverpool	———	Ballycotton	Mar. 8.
Princess Royal		Newcastle	Brownlee	Sligo	London	Yarmouth	Mar. 9.
Providence		Newcastle	———	———	———	Off Spurn	Mar. 30.
R. Burns		Liverpool	———	Petersburg	Liverpool	Abandoned	Jan. 23. cs
Sir R. Peel		———	Edwards	Ichaboe	Liverpool	St. Helena	Jan. aban.
Thistle	110	Glasgow	Jenkins	Glasgow	Demerara	Islay I.	Jan. 26. cs
T. Lowry		———	———	———	Ichaboe	At Sea	Dec.
T. Naylor		Liverpool	Orr	Ichaboe	Liverpool	Fayal	Dec. 24. 4d
Trinidad		———	Brown	Manila	London	Boulogne	Mar. 24. cs
True Blue		London	Fleming	———	———	Tees Bay	Feb. 6. cd
W. Henry	115	———	———	Liverpool	Vera Cruz	Campeche R	Nov. 26. 4cs
W. Pitt		Sunderland	———	———	———	Off Padstow	Jan. 20.
W. Turner	117	Belfast	Evans	Ichaboe	Liverpool	Carnarvon B	Jan. 18. cd

68—Abandoned and afterwards foundered.—Crew received on board the Earl of Aberdeen.
70—Crew saved by Prospect, Bulmer of Scarborough.
85—Dismasted, passed abandoned off Tynemouth.
87—Sprung a leak and foundered.—Crew saved by a Sardinian brig.

THE MISSING PACKET SHIPS.—The missing packet ships, United States and England, the former of which sailed from Liverpool on the 26th of November, the latter on the 1st of December, continued, when the last accounts left New York, to be the theme of deep anxiety on the part of the owners and the public. Both the vessels had valuable cargoes. One of the cabin passengers on board of the United States was the Rev. Mr. Tulloch, who fled from Scotland after committing forgery. There were on board the England—Officers and crew, 22; steerage passengers, 68: 90. On board the United States—Officers and crew, 24; cabin passengers, 2; steerage passengers, 48: 74. Total in the two ships, 164.

COURT MARTIAL.—On the 9th of December a court-martial was held at Valparaiso, on board the *Pigeard*, to try Lieut. W. H. Bridge, senior Lieut. of the steamer *Cormorant*, for a breach of the 23d Article of War, which declares, that "If any person in the fleet shall quarrel or fight with any other person in the fleet, or use reproachful or provoking speeches or gestures, he shall, upon being convicted thereof, suffer such punishment as the offence shall deserve, and a court-martial shall impose" Captains J. A. Duntze, *Pigeard*, president; Sir T. Thompson, *Talbot*; J. J. Tucker, *Dublin*; G. T. Gordon, *Cormorant*; G. G. Macdonald, Commander of *Dublin*; J. Pinhorne, Esq. officiated as judge advocate. The charge was founded on a letter of complaint from the Vice-consul of Islay, T. Crompton, Esq., who alleged that on going on board the *Cormorant* to pay his respects to the commanding officer, he met Lieut. Bridge on the quarter-deck, and on tendering him his hand, he drew back and refused to take it in a most haughty and contemptuous manner, saying, "That he did not know what familiarity existed between them for him to receive or for he (Mr. Crompton) to offer his hand to him, and upon pressing him for an explanation for such an unprovoked insult, Lieutenant Bridge said, "That he would not be upon terms with a person who had sowed or was the cause of dissension on board of a man-of-war;" and upon demanding the name of the author of so unfounded a calumny, he said, "He was a gentleman, and that on shore he would answer him," —a provocation which the Vice-consul considered intended to oblige him to have a hostile meeting with him. On the Court being sworn, the prisoner, who was assisted by T. Rowe, Esq., purser, submitted that he could not be tried for a breach of the 23rd Article of War, inasmuch as Mr. Crompton, the Vice-consul at Islay, was neither *in or belonging to the fleet*, or in any way amenable to martial law, consequently not being subject to its pains and penalties, could not partake of its advantages, for he enjoying perfect immunity may, without fear, urge him into the commission of an offence for which he may be punished (as the Article admits of no justification by provocation,) whilst the prosecutor escapes from not being amenable to martial law. He, therefore, submitted that the Court must declare the charge not within its jurisdiction, for when evidence is offered as to his disputing with Mr. Crompton, it could not be received as evidence of his quarrelling or disputing *with any* other person *in* the fleet." He further urged the illegality of the proceedings upon the grounds of his not having had twenty-four hours' notice before trial—that Commander Gordon having previously examined the witnesses in his cabin without his (Lieut. Bridge) being present, had already established in himself a court of enquiry, and was, therefore, ineligible to sit in that Court-martial as one of his judges. He moreover required Commander Gordon as a witness; and lastly that the court could not proceed, inasmuch as his most material witness, Mr. Crompton himself was absent, his evidence being essentially necessary to establish the correctness of his conduct. The whole of these objections having been overruled, much to the surprise of the prisoner and his friends, the witnesses were called upon to substantiate the charge, which occupied the court two days. The prisoner

in his defence, contended that Mr. Crompton had no right to insist on his giving him his hand; that although he had been frequently on board the *Cormorant*, he had never returned the attentions that had been shown him by the officers; that he was in a position to prove that Mr. Crompton had made incorrect representations to Commander Gordon, which tended to create unpleasant feelings in their small community; also, that he had, in a mixed society of civilians and officers, proposed a party toast, which might have compromised them as British officers, and which embarrassed them in the enjoyment of private society; he was not, therefore, to be brow-beaten into a familiarity which he did not approve of. He denied the interpretation which had been put upon his words when he told Mr. Crompton that the quarter-deck was not the place for such discussions—they must be settled on shore. Lieut. Bridge then submitted to the court certificates from Admirals Sir J. Rowley, Sir R. Stopford, Sir T. Briggs, Sir T. Hastings, and all the officers he had served under, all of whom spoke highly of him as a zealous, active, and excellent officer. He then called several witnesses, whose evidence however, was materially damaged by the determination made by the court to restrict the examination entirely to the events which took place on the quarter-deck of the *Cormorant*, inasmuch as the character and conduct of the prosecutor was completely shielded from investigation. The court pronounced the charge of a breach of the 23rd Art. of War to be partly proved, and adjudged Lieut. Bridge to be dismissed from H.M. sloop *Cormorant*.

Mr. Foulerton's Ship Manœuvrer.—This invention for moving a ship when the sails have no effect, is thought so favourably of, that a small vessel has been built at Woolwich, which fully confirms the most sanguine expectation of the inventor. Last week the vessel, fitted with Mr. Foulerton's manœuvrer, was tried in the basin at Woolwich, and made a complete revolution in less than 4½ minutes, with ten men at the winch. The depth of the immersion of the barge in the water was 3 ft. 9 in. forward, and 4 ft. 2 in. aft, and the length of the vessel 70 feet.

Royal Mersey Yacht Club.

In the *Nautical* for the past year, 1844, we announcced in July, at page 573, the formation of a new Yacht Club at Liverpool. The objects of that society were sufficiently set forth at the time. Now already in 1845, is the club known as a "royal" club, and we are glad to find, that unlike the members of the "Thames Yacht Club," founded in 1825, who still, as for twenty years, meet but monthly at an hotel, and strange to say, have yet no daily place of rendezvous for social intercourse or interchange of "aquatic thought," the men of the Mersey uniting only since 1844, have boldly and at once taken a higher flight, and secured to themselves a suite of rooms, open to them throughout the year, in a most convenient locality at Liverpool, (Slater-street); and moreover, set gallantly to work to found a naval library, museum, and general collection of models and curiosities bearing upon any and all branches of yachting and maritime knowledge. Such spirited conduct must not only deserve, but command success. Before, however, subjoining a list of the vessels of the Royal Mersey Yacht Club, we find it necessary for the benefit at least of some of our new correspondents and subscribers to offer the following table, simply to show at a glance an outline of the extent to which yachting is now carried, under our gracious Sovereign. We do this, because, notwithstanding all we have hitherto written, we still occasionally find in society not a few who possess

most erroneous information on this our national hobby; a hobby indeed which in its results is highly beneficial to the interests of the empire at large; and this admission has recently been made even in the House of Commons.

	Club.		*Port.*		*Flag.*
1	Royal Northern Yacht Club	—	Clyde	—	Blue Ensign.
2	Royal Eastern Yacht Club	—	Leith	—	Ditto.
3	Royal Harwich Yacht Club	—	Harwich	—	Ditto, with a Lion Rampant.
4	Royal Thames Yacht Club	—	London	—	Ditto, with a Crown.
5	Royal Southern Yacht Club	—	Southampton		Ditto, with the Southampton Arms.
6	Royal Yacht Squadron	—	Cowes	—	White Ensign.
7	Royal Western Yacht Squadron	—	Plymouth	—	Blue Ensign.
8	Royal Mersey Yacht Club	—	Liverpool	—	Ditto, with a Crown over the bird *Liver*.

To these squadrons must be added the Clubs of Cork, (*the oldest in the empire*), Dublin and the Shannon, with divers Sailing Societies, far too numerous to mention.

A reference to the *Nautical*, of 1844, at pp. 520, 572, 632, will give much information about some of these clubs, which we have not space here to repeat; and the Cork, Harwich, Eastern, and Southern Clubs we have noticed in the present volume for 1845, at pp. 32, 102, 154, 222. And even yet have we a long task before us! Let us here return then to our Mersey friends. *En avant!*

Yachts belonging to Members of the Royal Mersey Yacht Club.

Vessels.	Tons.	Owners.	Vessels.	Tons.	Owners.
Alarm	c. 193	J. Weld, Esq.	Lotus	c. 15	H. Roberts, Esq.
Belvedere	c. 25	Lord A. Paget.	Leda	c. 31	J. P. Brandreth, Esq.
Black Bess	c. 20	G. M. Corsellis, Esq.	Mermaid	c. 25	J. Grindrod, Esq.
Clutha	c. 25	T. Birchall, Esq.	Mosquito	c. 8	Lieut. G. Sunderland
Diamond	y. 20	Hon. Col. Pennant	Mervinia	c. 35	R. A. Pool, Esq.
Dolphin	s. 15	T. Littledale, jun.	Osprey	c. 45	R. M'Andrew, Esq.
Edith	c. 70	J. C. Ewart, Esq.	Psyche	c. 60	B. H. Jones, Esq.
Edith	c. 9	J. Edwards, Esq.	Phœbe	c. 33	H. F. Penny, Esq.
Elizabeth	c. 20	J. Heywood, Esq.	Reynard	c. 15	G. Lyon, Esq.
Fenella	c 49	J. Grey, Esq.	Seagull	c. 31	H. Melling, Esq.
Friendship	s. 10	J. Blundell, Esq.	Vestris	c. 8	E. Rodgett, Esq.
Isabel	s. 150	T. Moss, Esq.	Water Witch	c. 10	J. Wright, Esq.
Jane	s. 15	J. B. Hartley, Esq.	Weazle	c. 25	T. Pope, Esq.
La Jolie Fille	s. 109	H. D Griffith, Esq.	Xarifa	s. 183	Earl of Wilton.
Leander	c. 31	J. W. Haselhurst, Esq.	Zephyr	c. 12	A. Petrie, Esq.

Pirates.—*Lloyd's List* of Monday, March 10, contains the following news:—

"*Ostend, March* 5, 1845.

"The *Comete*, de Bonige, which arrived here from Messina, 2nd instant, was fired into by pirates in three lateen-rigged craft on the 9th ult., about fifteen miles off Cape Santa Maria."

H.M. Steam-Vessel "Growler."—*Jan.* 19*th*, 1844.—"On 13th of this month, Lieut. Lodwick, who had been away for some time cruising in the pinnace on the look out for slavers, off this place (the *Growler* being left to go down to Gallinas,) while he was guarding during our absence, fell in with a felucca, which, on seeing the pinnace, hove to; and, of course, Lieut. Lod-

wick thought, as she might have got away if she had chosen, she would show no resistance. When the pinnace however was within thirty yards, they observed a whole range of muskets fore and aft of the felucca; after this Lieut. Lodwick cheered his men on to get up to her before she discharged this fearful battery; but no sooner was the cheer out than the felucca opened on the boat. This was a staggerer for the poor boat, but fortunately this time they fired too high (the felucca had now filled, and was going just as fast as the boat could pull.) Lieut. Lodwick now returned this with a round shot, and 180 balls in a bag. In the first volley from the felucca the rim of Lieut. Lodwick's hat was shot through, but their second volley told with mortal effect. Two men were shot dead, and Lieut. Lodwick and two men severely wounded, Lieut. Lodwick having been struck on the left knee and thigh. This left the pinnace with so few men, and having had six of its oars shot away it was obliged to leave the field. We picked the boat up standing towards the Gallinas. I am happy to say Lieut. Lodwick is reported out of danger, and that he will also save his leg; the other two men are doing well. Capt. Buckle has represented to the Commodore, in glowing terms, the gallantry of Lieut. Lodwick on this occasion. The boat and gear were literally riddled. There are about seventy men on board this felucca; and the crew of a prize captured a short time since, say that she is commanded by an Englishman, the crew consisting of English, French, and Americans. She was here about four months ago, and chased by every vessel on the coast, but always got clear. She carried away her rudder going over a bar, and was obliged to return to Havannah. There must have been a great many killed and wounded on board her, as the crew of the pinnance could hear the groans."

The slave felucca that beat off the *Growler's* boat, so gallantly commanded by Lieut. Lodwick, has escaped no less than five times from our cruisers; once from a prize of the *Waterwitch;* twice from the *Iris*, when commanded by Capt. Tucker; once from the *Kite*, steam-vessel; and once from the boat of the *Growler*, steam-sloop. She is well known to all the men-of-war officers, and there is not a man on the coast who would not be delighted to give that account of her punishment and capture which we hope soon to record. She is a long, low, sneaking craft, with a stump of a mast not six feet above the deck, but having a yard running up at an angle of 45 degrees, above 180 feet long, with a sail that propels her through the water at such a rate as to distance the swiftest cruiser. We have heard that she was built at Barcelona, and has a crew of between sixty and seventy of the worst description of men stealers. Capt. Matson, we believe, captured a sister vessel to her, which for a long time had been notorious on the coast of Africa for her impunity and success.

The *Waterwitch* came within range, and, by a well-directed shot through the slings of her immense yard, knocked it about their ears, and thereby the slaver became entirely at her mercy. On this occasion the semi-pirate captain seized a musket and shot dead the man whom he had placed on the top of the mast to look out. The escapes of the felucca that beat off the *Growler's* boat, have been very narrow. On one occasion she was almost caught by a tender of *Waterwitch*, named the *Pretty Polly*. This vessel was a beautiful little craft, and, on being captured, was manned from the *Waterwitch*, and sent into a slave-dealing port to lie in wait for this felucca. Not aware of the capture and altered character of this vessel, but deeming her to be still in the iniquitous pursuit, the felucca stood into the place within a quarter of a mile of the *Pretty Polly*, and we believe had nearly got down her large sail, when she discovered she was in the vicinity of an enemy. She immediately, by great exertions of a numerous crew, got up her sail again, the *Pretty Polly* firing at her, and endeavouring to get nearer; but having such few hands, and the felucca being so fully manned, the wind also falling, and the felucca capable of being rowed with ease, the tender had no chance

with her. When the felucca got out, and perceived her advantage over the *Pretty Polly*, she several times most impudently bore down on her, fired a shot, and then ran away in no time. The *Waterwitch* was only fifteen miles off, and the tender made all haste to communicate with her; but when the *Waterwitch* and the *Pretty Polly* arrived at the slave port the next morning, they found that the felucca had been in, and by force of arms had seized a cargo of slaves, and had departed. Her escapes from *Iris* were almost miraculous. It is generally believed that nothing but a steamer will catch her.

Edwards's Patent Preserved Potato.

We understand that the Board of Admiralty has ordered this valuable preserved vegetable to be supplied to the ships for the Arctic Expedition.

The high opinion we have always entertained and frequently expressed of the value of Edwards' Patent Potato, as a sea store is again confirmed by the strong testimony given in the following statement.

"The convict ship of which I recently had charge, was liberally supplied with Preserved Potato for the purpose of experiment, and I received orders from the Admiralty to furnish a special report on this subject at the end of the voyage. This report was transmitted a few days ago, and is highly satisfactory. During the voyage to Van Diemen's Land, there was very little sickness on board, no death, and nothing throughout having the most remote resemblance to scurvy.

"Having seen the Preserved Potato tested so long and on so large a scale, I cannot help considering the preparation one of the greatest dietetic improvements of modern times, and one that cannot fail to prove highly important as an article of diet at sea. Experience enables me to state that in cases of sickness or convalescence, it does not produce nausea, like the frequent use of arrowroot, sago, &c., and that it retains all the virtues of the recent root.

"It is wholesome, palatable, and nutritious, portable, easily prepared, and with common care will keep uninjured in *any climate*, and I believe for any length of time.

(Signed) John Wilson, (*c*)
April 22, 1845. *Surgeon, R.N.*

New Charts.

Published by the Admiralty, and Sold by R. B. Bate, 21, Poultry.

Africa, Western Coast, *Sheet* 4, *from C. Bojador, to C. Blanco.—By Capt. Vidal.* Price 2s.
Africa, Western Coast, *Sheet* 5. *from C. Blanco, to C. Verd.*
Zaffarin Islands.—*By Lieut. M. A. Slater, R.N.* Price 6d.
Wakaroa Bay, *New Zealand.—By Com. O. Stanley.* Price 6d.
Salween River.—*By Lieut. Wolloth, R.N.* Price 2s.
Levrier Bay and Cape Blanco, *Africa, Western Coast.—By Capt. Sir E. Belcher, R.N.* Price 2s. 6d.
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CAPE PALMAS, WITH TAFOU RIVER, *Africa, West Coast.* — *By Capt. Vidal, R.N,* Price 2s.

ICHABO ISLAND, *Africa, Western Coast.—By Capt. Sir John Marshall, R.N.* Price 1s.

DOVER BAY.—*By Capt. Bullock, R.N.* Price 1s.

MONTHLY RECORD OF NAVAL MOVEMENTS.

America, 50, Capt. Gordon, Oct, 25, arr. at Callao, Dec. 25, remained; *Actæon*, 16, Capt. Mansell, March 2, at Madeira; *Alfred*, 50, Commodore Purvis, Feb. 3, at Rio; *Alert*, 6, Com. Bosanquet, left Bathurst for Leeward Islands.

Collingwood, Dec. 15, arr. at Valparaiso; *Comus*, 18, Com. Thompson, March 22, left Madeira for Brazil; *Cormorant*, st. v.. Dec. at Valparaiso; *Caryefort*, 26, Capt. Right Hon. Lord G. Paulet, Dec. at California.

Dublin, 50, Capt. Tucker, with the flag of Rear Admiral Thomas arr. at Spithead, March 25,—29th, sailed for Devonport, 31st, arr.; *Daring*. 12, Com. Matson, March 21, arr. at Devonport; *Daphne*, 18, Capt. I. J., Onslow, Dec. 20, at Arica.

Espegle, Com. Thompson, March 21, arr. at Devonport; *Eagle*, 50, with flag of Rear Admiral Inglefield, March 29, sailed for South America; *Eurydice*, Hon. Capt. Elliott, March 3, at Sacrificios.

Flying Fish, 12, Com. Harris, March 21, arr. at Devonport, April 16, sailed for Africa; *Firebrand*, Capt. Hope, March 6, at Madeira; *Ferret*, 6, Com. Oake, Feb. 5, at Ascension; *Fisgard*, 42, Capt. Demtz, Dec, 20 at Valparaiso, 6th, arr. from Calloa.

Gorgon, st. v., Capt. Hotham, Feb. 3, at Rio.

Hyacinth, Capt. Scott, March 23, at Bermuda; *Hermes*, st. v., Com. Carr, March 23, at Bermuda.

Inconstant, 36, Capt. Freemantle, March 23, from Tampico at Bermuda; *Illustrious*, Capt. Erskine, March 23, at Bermuda.

Lily, 16, Com. Newton, March 2, at Maderia.

Modeste, 18, Com. Baillie, Dec., in the Columbia.

Porcupine, surv. v., Capt. Bullock, March 24, arr. at Sheerness; *Pilot*, 16, Com. Jervis, Feb. 7, at Madras; left Madras for Trincomalee; *Persian*, Com. Coryton, March 23, at Bermuda; *Pique*, 36, Capt. Hon. M. Stopford, March 5, left Brrbadoes for Demerara.

Resistance, Com. Patey, March 25, arr. at Spithead, from Halifax; *Rapid*, Com. Earle, Feb. 10, at St. Helena; *Racer*, Com. Reid, at Monte Video, Feb. 1; *Royalist*, 10, Com. Ogle, Jan. 25, at Singapore, to be sent home, or sold.

Sparrow, surv. v., Com. Otter, March, left Portsmouth for North coast of Scotland; *Scylla*, 16, Com. Sharpe, March 19, left Jamaica for Chagres; *Snake*, 16, Com. Devereux, March 16, at Barcelona; *Satellite*, 18, Com. Rowley, Feb., at Monte Video; *Spartan*, Capt. Hon. C. Elliott, March 23, at Bermuda; *Serpent*, 16, Com. Neville, Feb. 1, arr. Bombay from Aden, 23d, sailed.

Talbot, 26, Capt. Sir T. Thompson, Bart. Dec. 20, at Valparaiso.

PORTSMOUTH.—Ships in Port—*Apollo*, at Spithead, *St. Vincent*, *Victory*, *Hibernia*, *Excellent*, *Royal Yacht*, *Rodney*, *Styx*, *Alban*, *Comet*, *Fearless*, *Nautilus*, in harbour.

PLYMOUTH.—In Harbour—*Caledonia*, *San Josef*, *Canopus*, *Vanguard*, *Melampus*, *Grecian*, *Pandora*, *Peterel*, *Seagull*, *Bloodhound*, *Linnet*, *Jackall*, and *Confiance*, steamers.—In the Sound, *Albion Superb*, *Daring*.

The *Alfred*, 50, Commodore Purvis, the *Gorgon*, steam sloop, Capt. Hotham, and the *Viper*, brigantine, Lieut. Commander Carter, were at Rio Feb. 3. The *Gorgon's* injuries from going ashore were not found to be of sufficient consequence to require her being sent to England immediately. She was ordered back to the River Plate. The *Viper* was under orders for England, but having detained a vessel with slave fittings, she was waiting the adjudication.

PROMOTIONS AND APPOINTMENTS.

(From the Naval and Military Gazette.)

PROMOTIONS.

RETIRED CAPTAINS— under H. M.'s Order in Council of 10th August, 1840, —W. P. Roberts.—F. W. Rooke.

CAPTAIN—R. H. Stopford.

COMMANDERS— T. Chaloner and J. R. Ward—J. Foote (on Rear Admiral Thomas, late Commander in Chief in the Pacific hauling down his flag on board the *Dublin*, 50)—J. Lodwick.

LIEUTENANTS — D. M. Gordon—S. Apthorp.

APPOINTMENTS.

VICE ADMIRAL— Sir E. Durnford King, K.C.H., to be Commander in Chief at the Nore,—Vice Admiral Sir C. White, K.C.B., deceased.

ADMIRAL—Sir John West, K.C.B., to be Commander in Chief at Devonport on the expiration of the term of service of Admiral Sir David Milne, G.C.B.

CAPTAINS—J. C. Fitzgerald (1844), to *Vernon*—Sir H. J. Leek (1826) to *Caledonia*—H. J. Worth (1840), to *Trafalgar*—Sir B. Walker, K.C.B., (1838), to *Queen*.

COMMANDERS—J. C. Prevost (1844), of *Eagle*, to *Vernon*, flag ship for Rear Admiral Ingl field—W. Worsfold (1841) to *Queen*.—Geo. Douglas O'Callaghan (1841), to *Vesuvius*.

LIEUTENANTS — J. A. Macdonald (1821), to *Lizard*—S. H. Pickard (add.) to *Vindictive*—Read and R Hawkins to *Apollo*—E. H. Blake (1845), to *Melam-*
-T. H. Christian (1839), to *Superb*
allersh (1837), Harry T. Vietch
ernon—H. P. Dicken (1815)
W. Moorsom (1842), to *Ex-*
Cumberland, (1841), to
Edye (add.), 1841, to
M. J. G. Pasco (1830),
J. Jones (1810), to *San*
erland (1841), W. P.
, and G. B. Nott (1829)

MASTERS—J. Reid to *Erebus*—W. Ellis to *Vesuvius*—H. N. Thomas to *Vernon*—R. Hoskyn to *Brecon*.

MATES—R. W. Thomas to *Terror*—M. P. O'Reilly to *Fantome*—A. Wodehouse to *Canopus*.

SECOND MASTERS—W. Williams to *Jackall*—T. Wells to *Mastiff*—G. A. Water to *Dee*—F. Kent to *Lizard*—W. Pyper to *Melampus*—E. J. Tucker to *Canopus*.

MIDSHIPMEN—H. M. Faulkner and G. M, Trevenon to *Eagle*.

NAVAL CADETS—W. Wise, F. Howard, A. Elliott, and T. S. Gooch to *Hibernia*—E. Angier to *Vanguard*.

SURGEONS—J. Low to *Queen*— Jas. M'Bain, M.D. to *Mastiff*—T. H. Keown, to *Vesuvius*.—J. Park to *Espiegle*—J. Coulter, M.D., to *Grecian*—Harvey Morris, superintendent of the convict ship *David Malcolm*—Robert Dobie, superintendent of the convict ship *Ratcliffe*.

ASSISTANT SURGEONS—D. Ritchie and A. Borthwick to *Queen*—C. E. Protheroe to *Jackall*.—J. A. R. Harvey, M.D., to *Melampus*—E. J. Walsh, to *Poictiers*, for service at Melville hospital — W. M'Mahon to *Fearless*.—E. Lawless to *Vesuvius*—T. Seacombe to *Lizard*—I. T. Caddy to *Victory*.

PAYMASTER AND PURSER — J. Fletcher to *Queen*.

SECRETARY—J. Pinthorn to Vice Admiral Sir E D. King.

CLERK—T. E. Gould to *Jackall*.

COAST GUARD.

Appointments.—Com. Orbell Oakes, R.N, to be Inspecting Commander of the Gosport District,—Com Ramsey, service expired. Com. John Thomas Talbot, R.N., to be Inspecting Commander of the Whitby District,—Com. Robinson, service expired. Lieut. J. S. W. Grandy, Lieutenant of Station Portsmouth harbour, to command the

Active, R.C.,—Lieut. Edwin, appointed to a Station at Southampton Water. Lieut. Charles Goldsmith, R.N., Commander of *Shamrock*, R.C., (paid off) to command a Station.

Removals.—Mr. Peter Johnson Freyer, Chief Officer, to Claggan, Galway. Lieut. John M'Nevin, to Bama. Lieut. M. Knox to Port Rush. Lieut. N. B. Alexander to Cooley Point. Lieut. J. Senior, to Rush. Lieut. H. Lawless, to Skerries. Lieut. William Coles, to Challaboro'. Lieut. W. Hole, R.N., to Weston Supermare. Lieut R. G. Jeffreys, R.N., to North Queensferry. Lieut. John Allen, R.N., to Portsmouth. Lieut. Grandy, appointed to the *Active*, R.C. Lieut. Henry Collins, R.N., to Jarrow Quay. Lieut. William Henry Goslin. R.N., to North Isle of Arran.

Births, Marriages and Deaths.

Births.

At Belmont, Hants, April 7th, the wife of Capt. James Stirling, R.N., of a daughter.

At Southsea, March 16th, the wife of Commander C. Holbrook, of a son.

Marriages.

At Harbledown, the Dowager Marchioness of Hastings, Baroness Grey de Ruthven, to Capt. Hastings Reginald Henry, R.N.

At St. George's, Hanover Square, March 6, Rear-Admiral of the Red, Edward Walpole Browne, of Walmer, Kent, to Hannah, eldest daughter of the late Robert Ogle, Esq., of Eglingham, Northumberland.

At Hampton, March 25, Capt Berners, of Rl. Artillery, to Elizabeth Jane, daughter of the late Vice Admiral the Hon. Sir G. Page.

At St. Peter's, Eaton-sq. March 24, the Hon. C Maude, 2d Life Guards, to Clementina, daughter of the late Admiral the Hon. C. Fleeming.

At St. John's, Paddington, April 2, Commander Burridge, R.N., to Mrs. Green.

At the Sardinian Chapel, Lincolns-inn-Fields, March 31st, J. Drake, Esq., of Rathmines, Dublin, to Jane, eldest daughter of Lieut. J. A. Moore, R. Marine Artillery, h.-p.

At Wotton-under-Edge, Lord Gifford, to Frederica Charlotte, eldest daughter of Capt. Berkeley, R.N.

Deaths.

Quarterly Naval Obituary. — Flag Officers — Vice-Admiral Sir Thomas Baker, K.C.B. (1837), Vice-Admiral C. Wollaston (1841), Rear-Admiral Sam. Jackson, C.B. (1841). Captains—J. Baker (1810), Thomas Huskisson (1811), Augustus Vere Drury (1814) retired, John Gascoyn (1840), Henry Probyn (1840). Commanders — Henry Smith Wilson (1820) retired, William Usherwood (1830), Blachen F. West (1843), Joseph Batt (1840), Richard Clark (1843), John Tresahar (1827), Bennett Fellows (1836), William Symons (1837), Joseph B. Mant (1837), James Brockman (1830), Hans S. Elsmere (1831), Thomas Hughes (1839), George Brearly (1840), Adam Grieve (1843). Lieutenants—David T. Nightingale (1842) Edward B. Hicks, (1812), James W. L. Shiels (1814), Henry M. Short 1815), Orlando H. Wilson (1815), William Hewett (1815), Robert R. Auchmuty (1819), James Truppo (1825), Edward N. Kendall (1827), Thomas Stephens (1834), George Vincent (1834), Charles F. Wade (1838), Martin S. Kirkes (1840), Aug. P. Green, (1842), Robert J. D. Waldilove (1843). Masters—William Oliver (1807), James Doidge (1840). Chaplain—Charles H. Lethbridge (1823). Mates—Eudo Wells, Gerald Kingsley. Second Master—George S. Hall. Physician—Sir Isaac Wilson, Kt., M.D. (1805). Surgeons—Thomas Marchant (1812), Stephen Lanigan (1809), David Watson (1809), Charles M'Arthur, M.D. (1828), David P. Williams (1829), Alexander Sanderson (1837), William D. Wilkes (1842). Assistant Surgeons—William Cowling (1808), Patrick H. Long (1812), Hamilton Stewart (1813), Coryndon C. Easton (1838). Paymasters and Pursers—Richard Booth (1797), William Thompson (1797), James C. Cumming (1803), John B. Cotman (1804), Lemon L. Lellyet (1803), William Harris (1812).

Royal Marines.—Captain—Thomas Gilbert (1781). First Lieutenant—Henry Howard (1812). Second Lieutenants—Vesey Bishop (1780), Bedinfield Pogson (1798).

Whitehall, Jan, 25, 1845.—The Queen has been pleased to direct letters patent to be passed under the Great Seal, appointing the Right Honourable Henry Thomas Lowry Corry, Joseph Hume, Aaron Chapman, Edward Royd Rice, and Thomas Baring, esqrs. Francis Beaufort, esq. Captain in the Royal Navy, or the Hydrographer of the Admiralty for the time being; George Biddel Airy, esq. or the Astronomer Royal for the time being; John Washington, esq. Captain in the Royal Navy; and Henry John Shepherd, esq. or the Consul for the Affairs of the Admiralty and Navy for the time being, her Majesty's Commissioners for inquiring into the state of the harbours, shores, and rivers of the United Kingdom.

METEOROLOGICAL REGISTER.

Kept at Croom's Hill, Greenwich, by Mr. W. Rogerson, of the Royal Observatory.

From the 21st March, to the 20th April, 1845.

Month Day.	Week Day.	Barometer.		Fahrenheit Thermometer, In the Shade.				Wind				Weather.	
								Quarter.		Strength			
		9 A.M.	3 P.M.	9AM	3PM.	Min	Max	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.
		In Dec.	In Dec.	o	o	o	o						
21	F.	30 47	30·51	31	43	23	45	SW	SW	2	3	b	bc
22	S.	30·38	30·34	41	47	33	48	SW	SW	4	4	or 1)	or 3) (4
23	Su.	30·22	30·13	48	49	44	50	SW	SW	3	4	or 1) 3)	or (3) (4)
24	M.	30·04	30·10	45	52	41	53	NW	NW	3	3	bc	bc
25	Tu.	30·04	29·94	43	51	36	52	S	S	2	4	o	od (1)
26	W.	29·81	29·88	46	52	42	54	NW	W	4	6	bcm	qbc
27	Th	29·81	29·89	51	57	43	58	W	W	6	6	qo	qo
28	F.	29·66	29·72	50	54	47	55	W	W	7	7	qbc	qbc
29	S.	30·02	30·16	44	52	38	53	NW	NW	6	5	qber (2	qbc
30	Su.	30·28	30·14	44	52	35	53	SW	SW	2	4	bcm	od (4
31	M.	30·14	30·22	45	55	38	56	NW	NW	2	2	bm	bm
1	Tu.	30·28	30·22	40	48	33	49	E	E	3	4	bc	b
2	W.	30·12	30·08	43	55	32	56	E	E	3	3	bcm	bcm
3	Th.	29·97	29·92	47	64	35	65	SE	SE	3	4	b	b
4	F.	29·90	29·96	48	63	36	64	E	E	3	3	b	b
5	S.	30·05	30·01	40	52	35	53	NE	E	3	4	bc	b
6	Su.	29·92	29·88	43	54	31	55	NE	NE	4	4	bv	bv
7	M.	29·91	29·89	37	55	29	56	NE	E	3	3	b	bv
8	Tu.	29·54	29·48	42	50	32	52	SW	W	3	5	or 2)	qbc
9	W.	29·05	28·95	41	41	30	45	NE	NE	5	3	qo	od (4)
10	Th.	28·98	29·05	39	45	36	46	NW	NW	4	5	op (2)	qop (4)
11	F.	29·36	29·48	40	44	35	45	NE	NE	4	4	o	o
12	S.	29·74	29·76	48	50	36	42	NW	W	4	3	o	op 4)
13	Su.	29·81	29·61	46	47	35	49	SW	SW	3	5	bc	qor (3) (4
14	M.	29·42	29·48	47	49	41	51	W	NW	7	8	qbcp 2)	qbcp (3)
15	Tu.	29·65	29·91	41	43	39	43	N	NE	9	7	qor (2)	qo
16	W.	30·25	30·25	42	50	38	52	NE	N	6	4	qo	bc
17	Th.	30·25	30·23	49	59	36	60	NE	NE	6	6	qb	qbc
18	F.	30·15	30·10	41	57	38	58	NE	NE	4	4	bc	b
19	S.	30·08	30·02	45	59	38	60	N	N	5	5	bc	b
20	Su.	30·11	30·12	48	64	38	65	NE	E	3	2	bc	b

March 1845.—Mean height of the Barometer=29·942 inches; Mean temperature =35·8 degrees; depth of rain, and snow melted, fallen 1·47 inches.

TO OUR FRIENDS AND CORRESPONDENTS.

Our best thanks to Mr. J M. Drach for his attention in forwarding the account of the Storm of 1703.

The remainder of Port Royal directions in our next.

In reply to several inquiries the article on Merchant Seamen will be concluded in our next.

HUNT, Printer, 3, New Church Street, Edgware Road.

Voyage of H.M.S. Blonde, Capt. F. Mason, *from Port Royal by the Windward and Crooked Island Passages to Port Praya.*

April 11th, 1834, at 2 P.M., rounded Morant Point, with a light south-east breeze, and stood over to the eastward to close upon the Haytian shore, with the intention of proceeding to the northward along that coast. We had determined upon the Crooked Island Passage in preference, unless the wind should decidedly favor one of the other outlets. On the following morning we had reached under Navassa, having been favoured through the night by a continued south-east wind, which soon after daylight fell light, and a calm ensued.

By noon of the 13th, we had reached within fourteen miles of Cape Donna Maria, (Hayti), carrying light variable winds, but chiefly from W.N.W., and no perceptible current.

At sunset, April 15th, we were nearly in mid-channel, between Cape Maise, (Cuba,) and the coast of Hayti, about Cape St. Nicholas, the wind light, and unsettled from S.E. to N.N.W., and not at all more regular by day, than by night,

Noon of the 16th, we were within five miles of the middle point of Inagua, and had light south and west winds, to the end of the day: steered N.N.W. ¼ W. for Castle Island, and at day break of the 17th, saw the Hogsties N.E.b.E. somewhat nearer than expected.

Approaching Castle Island from the south-east, the Castle rock could not be readily distinguished till we drew within five or six miles, but on a nearer approach, its whiteness, and the white bluff of Castle Island is very remarkable. We lay becalmed under Castle Island all night. On the 17th, and about daylight the following morning received a light increasing breeze from the N.N.W., which enabled us to work up between the isle and the Mira-por-vos shoal, making the cays on the latter whenever we stood to the westward. Towards 8 P.M. the wind drew to the north-east, and settled as a regular trade; and from 10, when Castle Island was seen about five miles distant, we stood over to the N.N.W., until near daylight of the 19th, and by so doing we closed upon Long Island, (Yama,) which was also a lee shore, at a time when it could not be discovered above 2 or 2½ miles, though the morning was particularly fine. By keeping over on this side we lost an excellent opportunity of proving the chronometers, for having compared with the *Thunder* surveying vessel at Port Royal, and obtained her site of Moss flag-staff on Crooked Island, we were anxious to have had observations on its meridian. But we saw no more of Crooked Island.

Soon after noon of the 19th we made Rum Island, and in two hours after Watlings Island was seen also; no opportunity presents itself of obtaining observations on the meridian of any of the points of these islands, but this afternoon, when the centre of Rum Island bore S. 34° W., and the centre of Watlings Island N. 45° E., (magnetic,) the longitude by mean of chronometers 363, 563, and 1862, was 74° 36′ 15″ west.

We made several boards to pass to the eastward of Watlings Island, for though the passage within is broad and clear, yet a westerly set is

sometimes found there ; and, in the event of strong northerly winds coming on, it places a ship needlessly upon a lee, as well as a low, and very dangerous shore. We did not, therefore, finally clear this passage till 4 A.M. of the 20th, though the wind was fresh at E.N.E., and water smooth all through the Crooked Island Passage ; and, indeed, from Navassa, though the lead was generally kept going, we never once struck the bottom.

At 4 A.M. of the 20th we were entirely clear of the passage, which had occupied nine days from Morant Point.

In Crooked Island passage, and its vicinity, the gulf weed was very abundant, and bore all the appearance of freshness. After clearing the passage a few hours only elapsed before we caught the usual trade, at first light but increasing as we drew northward. On the 25th we reached the parallel of 28° when the trade was superseded by a W.S.W. wind, which had veered round suddenly upon us ; blew moderately, and enabled the ship to run down her easting with celerity. The wind continued from the southward and west to north till the 7th of May, until we reached longitude 28½° W., and latitude 31° 45′ N., when the above winds ceased, and in a few hours we received a north-east wind too early to be fairly considered the trade, nevertheless it continued, and carried us into the heart of that wind, and in general it will be found that in the spring and summer months, at least, westerly winds will be met without the meridian of the Azores ; while between those islands, and the coast of Portugal easterly winds are prevalent.

Up to the 8th also, as if the sea had been influenced by a continuance of westerly winds, we found it daily in motion to the eastward ; but on the 9th a strong westerly set was met with, which continued for several days. As we drew to the eastward the gulf weed was observed to lose its fresh appearance. and the nodules to float more heavily. We finally lost it in 31° N., and 27¼° W. ; but we met none of any kind in that part of the ocean which some denominate the Sargasso Sea.

At noon May 12th, we were in latitude 18° 45′ N., and longitude 24° 20′ W., the north end of San Antonio by account S. 27° W. 104 miles ; at this time it became the intention to steer for Porto Praya in San Yago, we accordingly hauled up to the south, carrying the usual trade.

We reached Porto Praya on the evening of the 13th of May, and came to in 13 fathoms, flag-staff at the fort N. 41° W. (true) one mile ; Punta Tamoris S. 64° W. ⅝ mile. The Bay of Praya is too well known to need any description : the island is at present under the constitutional flag ; it has suffered lately very severely from drought, to which the whole group is so liable, and many of the unfortunate inhabitants had perished in consequence ; but though refreshments are not so cheap or plentiful as formerly, yet there appears at this moment no actual want ; we purchased two oxen. Poultry, kids, oranges, pumpkins, bananas, and pine apples were plentiful and cheap.

Native boats were engaged to bring off water, but as it was procured very slowly we only received one turn.

Our observations in Date Tree Valley at this present time gave the latitude 14° 54′ 14″ N., and the variation of the compass 15° W., being the mean of sundry observations with the ship's head differently placed.

The site of observations in Date Tree Valley is $\frac{3}{8}$ths of a mile E. 7° N. (true) of the fort flag-staff.

A number of new houses are in progress, so that a stranger might suppose the place to be improving in population and opulence; but the inhabitants express with bitterness their sentiments of the policy by which their prosperity is abridged, and the islands impoverished by the oppression they have lately suffered.

The landing places, which might so easily be made secure and convenient, are in the same state they always have been, that is, just as rude and rough as when the island commenced its existence.

The fort is deprived of most of the brass pieces which were observed here in 1826, and the garrison is now wholly formed of black native troops.

The tides in the bay are very irregular, the surf heavy on the beach, but less so in the early part of the day; but landing is at all times easily effected by bringing a boat to a grapnel, and veering her in stern foremost to the rocks.

Porto Praya, as is well known, is but an indifferent place for a ship to touch at, especially wanting water, but the call of a ship of war is at all times a most charitable visitation to these poor and inoffensive islanders.

From the east end of San Nicholas our standard measured $30\frac{3}{4}$ miles to the site of observation in Date Tree Valley,—the valley being to the west.

Remarks on the South Channel of Port Royal, Jamaica.—*By G. Biddlecombe, Master, R.N.*—1844.

(Concluded from p, 227.)

Vessels bound to sea from Port Royal, through the South Channel should be under way as soon as the day breaks, if there is a land wind, (or if the wind will allow them to lie S.b.E., they may get out); the current is generally setting to the southward as far as Drunkenman's Cay, when it takes a more westerly direction. The leading mark through the Channel for vessels, not drawing over 17 feet, is the black and white floating beacon, (which is placed on the shoal of 22 feet), in line with the black beacon on the eastern part of Fort Augusta, N. $\frac{1}{2}$ E., (Mag.) The notch in the mountain, if not obscured, will be in line with those marks; but in a vessel of a draft of more than 17 feet, it will be necessary on passing the north-western mark of the Turtle-head buoy, viz., a deep gap in the distant hills, in line with the south extreme of Point Small, W.N.W., to keep to the westward till the black and white beacon is just open of the east extreme of Fort Augusta (to avoid the Knolls) until the high or southern part of the Drunkenman's Cay bears east, when you may haul up to the leading mark; and when the Cathedral-spire at Spanish Town comes in sight, you may haul to the eastward, or if bound to the southward, do not steer more than S.b.W., as there are some spots not well known a little S.E. of Wreck reef.

Note.—The small mark for being to the east of Wreck Reef, is the Apostle's Battery in sight eastward of Point Small.

Turning out of the South Channel.—Few vessels should attempt it,

unless they work well. The marks cannot be described better than by Mr. Donnerville, Master, R.N., who says, "If the wind be in the turning mark to the westward is, the leading mark on with the centre of a long house in Fort Augusta; and to the eastward, the mark on with the east end of Fort Augusta. Should you have a calm with a swell, cast anchor, if possible, near the Portuguese buoy, as with a sea breeze you may fetch out."

Note.—A person with local knowledge would often be enabled to work out with a sea breeze, knowing the several lights which he could stand into, and which would be impracticable for a stranger.

Buoys and Beacons on the Westward Side of the South Channel.—The Helshire white beacon is erected close to the beach in Helshire Bay. The outer, or three-fathoms bank buoy, white, with a staff and vane, 15 feet above the horizon, lies on the eastern part of the three-fathoms bank, in four fathoms water, with the following marks, viz., Kingston church steeple, over the eastern part of the rocks above water at Drunkenman's Cay, N.E.b.N., the flag-staff at Port Royal Dock-yard in line with the south east angle of the battery of Fort Charles, N.b.E. ½ E., Bloomfield's house on the Beach at Helshire in line with a gap, in the distant hills N.W.b.W.

The Turtle-head buoy, white, with a small staff and vane lies 100 yards S.E. of the eastern part of the Shoals in six fathoms, with the following marks, viz. Kingston church steeple in line with Rackum Cay, N.E. ½ N.; the notch in the mountain a little to the eastward of the centre part of the largest building in Fort Augusta, N. ½ E., south extreme of Point Small in line with a deep gap in the distant hills, W.N.W.

Buoys and Beacons on the Eastern Side of the South Channel.—The Portuguese buoy, red, with a staff and vane 15 feet above the horizon, lies on the western edge of the Portuguese shoals in five fathoms water, with the following marks, viz., the remarkable notch in the mountain touching the eastern part of Fort Augusta, N. ½ E., Helshire beacon in line with Helshire Hummock, W. ½ N.

The West Middle Buoy, red, with a staff and vane 10 feet above the horizon, lies on the N.W edge of the West Middle Shoals, in 6½ fathoms water, with the following marks, viz., Gun Cay in line with the red patch in the side of the hill at Rock Fort, N.E.b.E. ¾ E., the flag-staff in the Dock-yard, in line with the (Military) Surgeon's house at Port Royal, N.N.E. ½ E.; the hole in the Bluff at Point Small in line with Helshire Hummock, W.S.W.

In the South Channel.—A floating beacon 30 feet above the horizon, with a vane of rails four feet square, painted white on its upper part, with the lower part black, is moored on the Shoal of 22 feet, which lies about 440 yards in a N.N.W. ½ W. direction from the West Middle Buoy, and is the leading mark into the South Channel, when in a line with the black beacon on the east part of Fort Augusta.

Buoys and Beacons in Port Royal Harbour.—A White and Red Pile is placed in 18 feet water on the Harbour Shoal; it lies west nearly a quarter of mile from the Garrison Wharf.

A White Buoy is placed on the extreme of Old Port Royal Shoal, in 9ft, with the following marks, viz., the Admiral's Pen, just over

Gallows Point, N.E. ½ N.; the highest white house up the hills in line with the eastern part of Fort Augusta, N. ½ W.

Note.—In the Eastern Channel the beacons and buoys on the north side are white, and on the south side black.

In the South Channel the beacons and buoys on the east side are red, on the west side white.

All beacons and buoys of more than one colour are placed on Shoals, and denote that they may be passed either side.

Shoals and Cays on the South Channel.—The west middle ground is a coral reef, part of which has only two feet water; it is steep to, particularly on the S.W. side; there is a red buoy on its N.W. part before described.

The Turtle Heads are dangerous reefs of coral; the Eastern Shoal has eight feet over it, but the Western has some parts awash. A white buoy lies 100 yards S.E. of the Eastward Shoal. To avoid the Shoal, keep Port Royal church belfry open to the eastward of the flag-staff of Fort Charles.

The South Knolls, S.E. of the Turtle Heads, are small patches of hard sand. The least water that I could find was 1½ fathom, which was on the one that lies in the line of the leading mark; on the other two to the eastward of the leading mark I could not find less than five fathoms; their extent is from 40 to 50 feet.

The Drunkenman Cay.—The south part is a collection of stones and sand. A few bushes have grown on it, and it is connected by a reef of rocks to a sand-bank above water, a little to the N.E. of it, and there are several rocks northward of it, some above water; it is steep to on its southern side. At about a cable's length you have seven fathoms; but a shoal lies between it and the Portuguese Shoals with very little water over it.

The Portuguese Shoals are two banks of from 17 to 30 feet; there is a red buoy placed on the north-west part of it before described. Bush Reef lies about three-quarters of a mile west of it, which forms the entrance to the South Channel.

The Three-fathoms Bank is a large coral shoal, with 17 feet water over it; it is on the western side of the entrance to the Channel, and has a white buoy placed on its north-east edge, before described.

Note.—In the fair way of the South Channel the bottom is generally composed of mud and sand, and occasionally clay, but near the reefs it is sand, with portions of broken coral.

The Merchant Service.

(Concluded from page 234.)

I am decidedly of opinion that any code of examination as to ability for command in our Merchant Service, having for its basis the right of excluding all such claimants as are not thoroughly versed in all the theoretical parts of their profession, must of necessity shut out numberless young men of strong practical knowledge and high respectability of cha-

racter, and who do know at sea sufficient for the safety of both ship and crew, and far more than they would be at all able to explain under the influence of a rigid examination in the presence of the old Commodores. Still something must be done respecting the matter, for it is a crying evil; but I cannot sufficiently caution Merchants, Owners, and Master Mariners, as to how they tacitly acknowledge the justice of any sweeping measures in the New Act, by passive non-resistance, or individual complaining, which is equally useless. But if Master Mariners think as I do, that the approaching Act of Parliament is of momentous interest to their present and future welfare or disadvantage, they ought to call meetings, and simultaneously discuss its merits, and petition Parliament in proper form for the abolition of its invalid and ill-advised parts.

Whilst this forthcoming bill is undergoing discussion, and Masters thereby made punishable by dismissal for what they do not, but are supposed to know, I think it would be highly proper that one clause of that bill, had for its purport and intent, the punishment of dismissal of those Captains, who having certain well-known means within their control and comprehension, (however limited), fail to make any use of them.

The following two of which negligencies I hold to be daily found ruinous to property and life in their consequences, and equitably punishable in the severest manner, namely:—Bad, or no look out being kept in Channel, and the utter inattention to the heaving the deep-sea or hand-lead, in nearing, or running up Channel. There is an old proverb, —"De mortuis nil nisi bonum," which being freely translated, means, —that when a man is drowned, his errors ought to be washed out of the minds of the living; and which is both too charitable and humane a feeling to permit of my producing individual instances, in proof of what I am about to advance.

Firstly, with respect to bad look out being kept, both as to the various bearings of the land in running up Channel, and the great negligence of some Masters as to the necessary precautions for guarding against the possibility of contact with other vessels in thick and bad weather. This neglect has been and is daily the cause of many ships, even in comparatively smooth water, receiving in one instant, more serious injury and the loss of spars than they would be liable to during the influence of a long and severe gale of wind in the open sea; to say nothing of the consequent detention and expense, involving as it often does, the sacrifice of all the hopes of the voyage, in a good freight home, through the necessary detention incident to the different repairs; add to which the very fatal and deplorable consequences of loss of both ships and lives, so often the miserable result of this wilful neglect.

This is a very serious evil, but a still far greater one, involving as it has done this last winter, and every winter indeed, the heavy and irreparable loss of thousands upon thousands of pounds, together with the most awful sacrifice of life, is that of the utter neglect of the use of the lead, either on making soundings, or in running up Channel. This sin of negligence is the more unpardonable, from the fact of how easy, simple, and effectual a mode of safety it ensures. But still for all this, in very many ships, the lead is stowed away under the Mate's bed-place for the whole voyage, the lead-line lost or missing, and when at the eleventh hour, it

is imperatively wanted and called for, no one knows where it is, until undeniable proof of the depth of water alongside is fully ascertained by the ship striking the bottom, and the sea making a clean breach over her. One curious and hardly to be credited cause of this neglect, is a kind of morbid dread in the minds of some Masters that this said operation of casting the lead will lead to an impression fore and aft that they are compelled to have recourse to the measure, from ignorance of their real position, and that without this assistance they could not make the land at all; and so, sooner than place themselves under this supposed and groundless imagination, they combat their own conviction of its propriety, and avoid its practice to their ultimate loss of often ship and life. Some Masters sound in thick weather, but not in fine, begging the question of a continuance of clear weather, which in this changeable climate of ours, in the Chops of the Channel, is somewhat like putting your head into a lion's mouth, and asking some one to look out when he wags his tail.

The result of this partial negligence is, that if thick weather comes on *just before* you sight the land, you are then obliged to sound *for the first time*, by which you get a certain depth and kind of bottom, the real position of which you are obliged to doubt, from having no previous corroborative soundings to substantiate your own convictions; in consequence of which doubts, you are inclined to edge away into what you *suppose* a mid-channel course, and the result too often is (as my highly respected friend Mr. Bates, of Cowes, lately, and so ably observed in a public letter,) that you are, with a westerly wind, more especially with any northing in it, hurried unconsciously over the iron-bound coast of France and Guernsey, both by the set of ebb and flood tide; and when you are expecting to make the Start point, you find yourself on a lee shore, often hard and fast before you are aware of your danger.

Some Masters too, sound on approaching land, say in 100 fathoms, run on and make the land, say the Lizard, for instance, and then never sound afterwards. This is equally a bad practice, as has been proved this winter on the coast of France, well up the Channel, for, in the winter time you are never sure of fine weather twelve hours together, and the more confined and intricate your navigation becomes, the greater the absolute necessity is for a free use of that most faithful monitor *the lead.*

Some men contend all this trouble is a useless waste of time, good chronometers being all sufficient to make a good landfall in the first instance; and steady steering, and a proper attention to your rate of sailing, all you require to guide you from headland to headland afterwards. This I in some measure agree to, as a feasible contingency, *in fine weather*, but why, I would ask, is it necessary, or ought it to be permitted, to run such a fearful risk, as that of being caught in bad and thick weather, without *every possible knowledge* within your power, as to where you are, or what you ought to do; which information is not to be gained, or relied on, even in your own mind, except from occular proof of the depth, colour, and matter of your soundings.

I maintain there ought to be a code of regulations for the Merchant Service of this country, enforced in some way, so as to compel masters of vessels to make use of this, and many other necessary precautions, for

the better preservation of lives and property, both abroad, at sea, and in channel: a wilful neglect of which, productive of such loss, being visited on the offender, by dismissal from future command.

Every master of a ship, when on the edge of soundings, or when in 150 fathoms water, ought to take a cast of the lead, marking well the kind of bottom and true depth of water; and this in a running ship with a fair wind, ought to be repeated twelve hours after, and then oftener until land is made, in any thing like hazy weather: and when land is made, and the weather at all thick, soundings ought to be taken on running up channel, and which, if properly attended to, will enable you to run up as far even as Dungeness light in comparative safety, with but a very casual sight of either land or lights. The very able survey of the Channel soundings by Captain White, R.N., has simplified the research of the bottom of the channel, until it is as plain to read as a book; the different shades of colour, matter, and quality between mid-channel, and the English and French coasts being so perfectly distinct, as not to be confounded, but from their ignorance or inattention. In entering upon these subjects, and explaining these negligences, I am far from saying or supposing every body alike guilty of them, or of that want of knowledge of their profession, which has called forth the discussion of the forthcoming Act of Parliament. In my observation as to the masters of West Indiamen, and others of the short voyage, not working lunars, I beg to say, that I by no means whatever wish to imply that many of them are unable to do it, but that they do not do it, and that they think with me it is not called for as often as is necessary for its perfection of correct time, is I well know, a perfect fact; and this being the case, how are Mates, in ships where this branch of navigation is in disuse, to become proficients in a part of the theory of their calling they never see put in practice? It is impossible.

I again call on Master Mariners as a body to keep a bright look out ahead, and to work with a will together, so as to keep a weather-gage on any parts of a legislative enactment, which however well intended, may eventually tend to run foul of, and cut them down to the water's edge.

Having now to advance my promised plan for the better regulation of the Merchant Service in its various branches, I beg leave to confess how fully sensible I am of the difficulties attending any arrangement in which are involved so many ramifications, and I earnestly entreat my readers to think kindly of my attempt, however wanting it may appear, for the sake of the thousands of sea-faring men of all grades, whom it is intended to benefit. My sheet-anchor in this effort I borrow from another, the man who emphatically may be called "*The Sailor's Friend*," and who has stood forth, at his own individual cost, to place his sailors in a comfortable and respectable home, where their wants are supplied on the most reasonable terms, their morals and better feelings all encouraged, by the knowledge that they are really thought worth caring about; their past conduct when good, remembered in their favour, and their future expectations of employment and advancement, not left to the poor prospect of good luck, but founded on the knowledge, that duty well done will be well rewarded. Add to all this, that the simplest and best mode of dissenting worship is thrown open to them under the very best auspi-

ces, and the maritime world will confess that Mr. Green, of Blackwall, is individually putting in practice, what, if generally adopted, would go further to ameliorate the condition of our sailors, than a thousand acts of parliament could effect. I for one man pray to God his endeavours may be crowned with success, and in spite of the dirty sneers I have heard thrown out both against his sailors' home and chapel, I *know* it will succeed; I say I know it, because I put my trust in his sailors themselves, and I am perfectly confident, that one and all of the real seamen in that employ, with that home and its contingent respectabilities and comforts about it, will never seek an asylum in the gin-shop and brothel.

The gin-shop and brothel, the two great charnel houses in which the sailor is allowed to bury every moral thought, act, and principle; to degenerate the able-bodied man into the maudlin sot, and to lose beyond all redemption every moral and religious tie that binds even decent society together. But this is a digression, however a true one. And now to the point:—First and foremost—it will be necessary for every Merchant, Owner, and Ship-master to subscribe one pound sterling annually, for the furtherance of the measures herein set forth. Think of the amount of money this would bring together. Having so done, Committees should be formed of such Merchants, Owners, and Ship-masters as would come forward and tender their individual exertions, for the purpose of considering the following plans and deciding on such as are held worthy of execution.

Firstly.—That the present condition of the British seaman in the Merchant Service, known by the name of the "fore-mast-man," as respects his position in the community at large as a citizen, is in the very lowest state of moral prostration, that his life of debasement, and drunkenness, has often the most fearful influence on his conduct at sea and abroad, producing in him, a contempt of all laws human and divine, and gradually destroying that constitution, from the soundness of which, he is alone enabled to bear up against the many hardships and privations incident to his perilous and laborious calling. That these evils being held at open variance, with all those ties which bind decent society together, also that they reflect disgrace alike on the individual perpretators, and on British seamen as a body, and that they in every way militate against all rule and good order.

It be decided—That certain houses called Sailors' Homes shall be built or taken on lease, wherein a certain number of seamen can be lodged and fed at a reasonable expense, combining the advantages of the greatest comfort and cleanliness, with order and sobriety; that each unmarried seaman becoming an inmate of such Sailors' Home, and member of this society, shall subscribe one penny per day during the time of his residence in it, towards the education of the orphan boys of all such brother sailors as have been cast away, or otherwise perished in the mighty deep, or in the proper discharge of their duties at sea or in port; five years certificate of good conduct being necessary, previous to their children being entitled to such education. Also, that all married seamen, who shall for five years be able to produce certificates of undeniable good conduct shall be entitled to the admission of one son into the maritime school belonging to this society, provided they have subscribed one penny per week to this society for the said five years. That the whole cost and

charge to each seaman for his board, washing, and lodging, shall not amount to more than ———shillings per week to be paid in advance. That any seaman becoming drunk or disorderly, during his residence in such Sailors' Home, shall on three repetitions of the offence, forfeit all claim to any advantages, remuneration, or employment from the merchants, owners, and masters of this society. That any man guilty of theft shall be at once discharged. I know perfectly well how visionary this plan will be held, by a great many persons, vitally concerned in the well being and doing of this most debased set of men. But surely British sailors have no particular or fatal curse upon them, more tenacious than the sins of other men, who are equally neglected or unreclaimed. If these poor fellows are thought worthy to do their share in transporting from the uttermost bounds of the sea every luxury in which the powerful and great delight to revel, if they have been, and are still able to protect an Englishman's home and dearest rights from invasion, plunder, and rapine; if in the discharge of their arduous and perilous duties at sea, they are allowed to be the first men of their class, I maintain it to be an indelible disgrace on society at large, and the maritime community in particular, that they are allowed to continue in a state of all moral prostitution!

I know there are only too many owners who care not for either the moral habits or bodily comforts of their crews, and who heed not one straw as to how degraded and lost a race of men they are daily becoming, so long as they are made to get their ship out and home in safety; or, as is too often the case, made the unwitting accomplices of the voluntary wreck of some old tub, which the present feverish desire to insure at Lloyd's so often lays them open to the expense and loss of. Call on these men for a sovereign as their subscription, and they will tell you they have nothing to do with a sailor's conduct on shore: when their ships come in they pay them their wages and have done with them, and when they want more men they can at all times get them from the crimps; the present state of things suits them well enough, and they would rather decline throwing a sovereign away on so fallacious a hope as that of reclaiming a set of men so proverbially bad. I beg leave to tell these gentlemen that this said pound sterling, (if subscribed and applied to the furtherance of a proper system as to the respectability of seamen's habits and conduct on shore,) would be found money to them ten-fold; that the mutinies, thefts, destruction of ship's property, desertion and disaffection now going on in the Merchant Service, costs these very gentlemen often a hundred a-year: I might indeed adduce instances of the bad feeling existing between owner, master, and crew, which have brought a loss on the first person of a thousand pounds sterling. And to what may all this be traced? To the total want of all unison of proper feeling between the parties concerned, to the painful knowledge on the part of Jack, that the good man has not only to do the bad man's work at sea and abroad, but that on his return home, he too often receives his pay curtailed of its fair proportions; and without thanks, and often character, he is allowed to go —where he likes best the world will say,—I deny it: he goes where his shipmates go from the influence of companionship and example, and because he has nowhere else to go: his wandering habits of life, long intervals of absence from the very few decent friends he may know, cut off from all the connecting links which bind proper society on shore

together, and neglected by his own proper masters and superiors, he is both too proud to seek for favours not likely to be granted, and too weak to resist a renewal of those temptations, to which absence has given a new stimulus.

It has been often argued that however drunk and debauched a sailor may be on shore, that by the time he is in the blue water again he is all right. Physically speaking he may be perhaps, having a constitution of iron, but this is neither the grievance nor the remedy I wish to bring forward. What I want of all things to call public notice to, is the debased and painful state of moral prostration, this really fine, warm-hearted set of men labour under; and which being allowed full scope at home, unchecked by advice, assistance or reproof, breaks out abroad into a constant repetition of mutiny and disaffection. Surely, surely, it is worth the while of the merchants and ship-owners to make an effort to help poor Jack out of the mud in which he is at present wallowing, and although perhaps his eyes may be at first too full of dirt to be able to discern either the extent or value of the kindness you would thus do him, he will eventually look on you with gratitude, and repay you by respectability and devotion to your service.

That book of Holy Writ, whose precepts, both moral and religious we all acknowledge the truth and value of, says these words:—"Cast thy bread upon the waters, and it shall be found after many days"; surely a crumb of this said bread can be spared, to save the souls of thousands and thousands of poor British sailors, who are,—I'm not going to preach, I willingly leave that to ministers,—but I will say who are allowed to peril their redemption, their hopes of all salvation in another world, and their health, comfort and standing in this, without any really sterling efforts being made for their rescue. Would any owner keep a shoe-black on his establishment or in his house, with habits such as three-fourths of the British seamen are branded with? No, he would not, because it would be unsafe, disreputable, and disagreeable. Then why not take measures that will enable every merchant and owner to meet the man without loathing and disgust in the public highways, by whose labour and courage his wealth is brought home to him?

Now, Jack, I've done with you, so you may go forward. And now for your numerous ill-clothed and worse fed and wholly untaught offspring, who ragged, hungry, and ignorant as they are daily to be found, will one of those days be bound apprentices to the sea, and barring accidents, become officers and Masters. *Why* are *you* left in the very gutters of demoralization? Would it not be better to build schools for your instruction, attached to the homes made ready for your relations and elders, wherein you could not only learn to read and write, and cypher, but where on your return home from your first voyage, and all others during your apprenticeship you would be made to attend at certain hours, and learn the rudiments of navigation? Would it not be also as well and proper, if, instead of allowing you to become the inmates of eating-houses about the purlieus of the various docks, you were made to live and sleep at a respectable Sailors' Home?

Would there not be fewer dishonest, disreputable apprentices, who are now too often a source of unlimited annoyance and disgust to both owner and master; and would not these properly educated lads be more

likely to make decent officers and reputable masters than the present state of things can possibly bring forth? And lastly, If some little pains were taken with both seamen and their children, so as if possible, to give them some other more rational idea of God's holy word than its most vile and wanton abuse and blasphemy, would it not in all ways be better? Then, indeed, you may begin to examine Masters as to their professional abilities, without their being able to retort on you,—"I asked for bread, and you gave me a stone."

If you want to get rid of an evil, begin at the very bottom of it. If you want to rid a field of thistles, grub them up, and don't waste time in cutting their tops off. *If* you want a radical change for the better in your Merchant Service make your seamen and apprentices decent and honest, and your Masters *must* be both efficient and respectable.

Chapter the Sixth.

Contains a Plan for the Proper Registry of Seamen's Names, Age, Conduct, and Voyages.

The utter impossibility at the present moment of gaining any real authentic knowledge of a seaman's previous conduct and ability as a sailor, when about to ship him for a voyage, is so very palpable a drawback on the present possible means of knowing who your men are, that every one must see the necessity (if good is to be done) of finding out some more intrinsic and *bona fide* means of learning their respective characters, than the *ipsæ dixit* of a crimp, or the mere formal discharge of a Master, printed and *signed* according to law. Now, in my opinion, the means of effecting this measure are so simple and perfect, and easy of accomplishment, that I am only surprised, so very little has been done towards its fulfilment. For example, supposing each Master of a ship was given a book, (printed as adjoined), and ordered by his owner to therein enter, on his approaching home, the conduct and ability of his officers and crew, such book being placed in his owner's hands, on his arrival. Why, if this book was placed at the office of the Ship Owners' Society, any Master could, by asking the names of his new men, and their last ship, call and satisfy himself pretty correctly as to their *previous* conduct and his *future* hope of comfort and safety for himself and ship. Even supposing there was no Owners' Society,—let each individual Owner direct such a book to be filled up by his Captain, and retained by his clerk, and the same results follow.

But now, you have no resource, but a knowledge of nautical physiognomy, which barely assists you to an obscure trace of general ability, ing you perfectly in the dark as to moral decency of conduct; which of ignorance your are released from, however, when your men join ip to leave the docks,—so beastly drunk, so utterly beyond the control or order, that you often leave port, feeling that every man ship is valuable in proportion to the soundness of his sleep, from a due time he returns to a kind of mystified perception of being and endowed with life and reason!

y doubt this assertion, as to the daily embarkation of besotted rds as British seamen, let their doubts be solved by going to the

Liverpool and London, or indeed any docks from which ships are outward bound, at high-water, and there they will see filthy spectacles of stupid, noisy drunkenness, revolting to the feelings of the most uninterested spectator, and as ruinous to both the health and morals of the men themselves,—as it is an utter disgrace to the mercantile world at large. Why is this national disgrace to continue unchecked? Take the departing ships of *any other country*, you shall not see one foreign seamen, for twenty of our own in the same state. We hold the Americans to be our equals as seamen, (at least I do), and it is with feelings of utter shame I am obliged to confess, that in propriety of temperance they are immeasurably our superiors.

Oh, "ye Gentlemen of England, who live at home at ease," how very very little do ye care for the moral welfare of thousands of seafaring men, employed by you and working for you. No; a fully insured ship, a steady, able Captain, and a good freight is the *summum bonum* of your wishes; and the habits of your crews, although revolting to every decent feeling, and in open violation of all law, is tacitly winked at; because the more drunk the sailor is, the sooner he is pennyless, and the sooner off again to sea, where his follies and moral prostitutions are alike hid and forgotten. But rely upon it, "as the dropping of water weareth away a stone," so will this foul spot on the character of our Merchant Service, bring mutiny, desertion, insubordination, and disease into the very heart of your Mercantile Marine.

Why not give merit in a sailor its due reward? Why not try to induce men, who have been exemplary in their conduct and perfect in their duties for a whole voyage, to comport themselves, the little time they are on shore, somewhat in unison with their seagoing habits, and not like swine? Are they not worth the trial? Are they so hopeless a lot, as to be held absolutely wanting, in the common attributes of their fellow men?—Because if so.—Why trust ships, cargoes, lives, and properties in the hands of the British seaman.

Date of Joining.	Names.	Age	Rank.	Sobriety.	Honesty.	Ability.	Health.	Length of Service.	General Remarks.
April 19	Thos. Morris	32	Able Seaman	Perfectly	Ditto	First rate	Tolerable	143 days	A good man
„	Robt. Brown	27	Ditto	Drunken.	Not honest	Good	Bad	ditto	A loose hand

The heading of this list is open to revision if necessary, but the principle ought to be put in practice in some way or other without delay. There are, both in London and Liverpool I believe, Register offices, where books of this kind are kept, and a very good thing too, as far as it goes, but the British owner and Irish landlord are alike void of any channel through which a mutual feeling of respect can possibly exist between their dependants and themselves, and in the mean time, the English crimp and Irish taxman creep in between, and rob both of their means, to the utter sacrifice of all deference on the one side, and all regard on the other.

Times are too bad to lay out a single farthing on speculative morality

or hopeless philanthropy, is the plea used and will be used, to talk down all attempts at moral nautical improvement; but when a popular preacher can win a guinea from the pocket of British merchants to teach good savages to be better, when a Charity Ball or a Fancy Bazaar will lure twenty pounds from the same depths, to support in independent idleness our Polar system against Russia, surely our own besotten, untaught, immoral, and irreligious seamen are worthy of a like effort in their favour, and the trial, gentlemen, shall only cost one guinea per annum, which shall be returned to you doubled and redoubled in decreased payments for wasteful expenditure, desertions abroad, and thefts at all times and of all kinds, both abroad and at home.

When these things come to pass, an owner may go on board his ship on her departure, without blushing for his crew, (which I defy him to do now,) and on her return he may repeat his visit with a chance of being acknowledged and recognized by that crew with pleasure and respect, in lieu of being jostled on the deck of his own ship, by a gross competition between ——, rogues, and crimps for the first chance of plundering the willing victim, who leaves ship, captain, owner, and officers without one thought of regret, or one kind word of parting.

M. M. KEANE.

STEAM COMMUNICATION WITH INDIA VIA THE CAPE OF GOOD HOPE.—*Drawn up by Mr. J. H. Little, formerly of the Hon. E. I. Company's Service.*

A PROSPECTUS has been sent to us for the formation of a Company to establish Steam Communication to India round the Cape of Good Hope. The vast importance of the interests connected with the undertaking, to say nothing of the magnitude of the whole subject in its various relations, claims serious consideration in these times of steam by sea and land.

The facility and rapidity of intercourse which has recently been established with India by the overland passage through Egypt, has so absorbed, and in a great measure realized the expectations of the commercial world, that not only the precarious nature of the tenure on which it is based has been overlooked, but it has prevented any attention being of late given to the possibility of securing an equally rapid, and more convenient intercourse to India by means of Steam ships, on England's own highway—the wide ocean. The partial failure of the
[illegible]pts which have hitherto been made to reach India by the old
[illegible] of Steam machinery has still further added to the success of the
[illegible]d route.
[illegible]reat improvements, however, which have been introduced in
[illegible]ssels and steam power, during the last few years, have recalled
[illegible]s to the attention of scientific men, and the present pro-
[illegible]first to hold out a feasible and tangible project for effecting
[illegible]object.
[illegible]f necessary to allude to the difficulties which time may throw
[illegible]y of the overland passage, to shew the importance of being

prepared with one based on a more secure foundation. The present Pacha of Egypt has shown himself so fully alive to the benefits which must result to his own dominions by our transit through them, that during his life the same favourable state of things may be anticipated towards England. But who can say how soon the political horizon may be darkened; how soon other kings may reign, "who know not Joseph;" how soon intrigues of rival states may induce him or his successors to view with jealous eyes the use of his dominions; or how soon war might interfere with our quick passages across inland seas and friendly deserts, and force us to the adoption of a route, which from its earliest discovery has fostered, and has become indispensable to our commerce!

These considerations alone should force the mercantile interests as well as every friend to this country, to encourage any scheme which presents a probability of accomplishing a speedy steam communication by sea with our Indian Possessions, one which would not be subject to the above contingencies, and one, which on careful investigation, appears well adapted to supply the wants of the nation.

Scarcely a year ago it could not have been accomplished, but the recent application of the screw-propeller to large sailing ships, has now suggested a plan for fully effecting the purpose; for the whole virtue of Mr. Little's scheme lies in applying this screw-propeller as an auxiliary power to efficient *sailing ships*.

By an analysis which Mr. Little has made, it appears that the fastest ships between England and Calcutta average the passage between 95 and 100 days, out of which nearly one-third of the time is lost in light airs and calms; but when the ships obtain the trade-winds and variables, their average speed is as great as could be obtained by constant steaming alone. Mr. Little therefore, proposes to build ships fitted in all respects for sailing, but having also the additional steam power applied to the screw-propeller. By the latter power the vessel could at all times be quickly placed in the most favourable positions for finding the trade winds, and for forcing their way through the light airs and calms, which baffle the progress of sailing ships.

From minute calculations it appears, that the voyage to Calcutta may thus be reduced to 61, or at the greatest 65 days, and the difficulties which have attended the voyages by steam only will be avoided.

We have no hesitation in stating that the scheme is practicable, and are glad to find from the Prospectus, from which we append some extracts, that it is to be founded on a scale worthy of the magnitude of the project.

It presents a striking contrast in a national point of view, to the many continental railway schemes which gambling speculators of the present day hold out as inducements for the investment of British capital.

One point alone, independent of its commercial advantages we would here hint at; it would form at once a most powerful auxiliary Steam Navy, it being proposed to construct the vessels, so that they may be equipped for war.

We earnestly call the attention of the commercial world to the subject, and confidently anticipate its success.

Extracts from the Prospectus of the East Indian and Colonial Screw-Propeller Navigation Company:—

"It is proposed to commence with eight ships, of 1400 tons each, built upon the most approved principles, and fully rigged; they will be fitted with engines of about 300-horse power, especially adapted for driving the screw propeller.

"It is intended eventually to extend the communication to the Australian Colonies.

"Families and invalids proceeding by these ships will obtain the advantages of the finest sailing vessels, combined with the expedition of steamers, and avoid the inconvenience of the Quarantine Laws, and the frequent transhipment of themselves and baggage."

The Seaman's Registry Ticket.

From the Diary of a Seaman.

I have said elsewhere that the Registry Bill is an excellent measure, and probably will force seamen into good behaviour. But from the power lodged in the hands of the Masters, the intemperate and tyrannical among them, may cause desertion. I will go over the ground, for the matter is of *vast importance* to this kingdom, though some may think a Registered Ticket but a very insignificant thing.

The provision attached to this feature of the Act is decisive and stringent. Restrictions are necessary; but when too tightly drawn, they often defeat the object of the framers; are altered, or allowed to become inoperative; in the latter case the law is brought into contempt. A grain of common-sense is worth all the speculative wisdom in the world, or that has ever been poured into it from the first year of the Thirty-fifth Olympiad, down to the outpourings of the Solons of our day.

Bearing in mind the value of a seaman to the State, caution is necessary in the framing of any compulsory measure that is to bind such a discursive being to the fulfilment of a certain stipulative duty, in which the State has no direct concern; or otherwise we might, unwittingly be "laying a rod in pickle" for ourselves. It appears that the Captain is to be the holder of the ticket during the voyage; and should the seaman conduct himself improperly, it is not to be returned to him; and consequently, he will be debarred from getting another berth in a British vessel.

The seaman thus placed has no other alternative left him than that of transferring his services to some foreign nation, (to America most probably,) so that he may become lost to his country. This is rather a startling effect, sufficiently so to make us extremely cautious of what we are about, and induce us to seek some modifying remedy.

Of all classes, the seaman is the most regardless of consequences, and hence this restrictive power, which, abstractedly, is excellent, may, in its working, become the means of driving away from our service the instruments by which its strength is upheld.

The probability is that the restless spirits will be found among the young seamen who are not married; so that we may lose the most valuable members (in one sense) of the profession, through the want of some modification of this feature of the Act. That modification, I conceive, to lie in the privilege of the seaman being allowed to exchange from one ship to another, *once* during a voyage, at his option. This simple regulation it is my belief would, as far as a rule can operate on the moral attribute of a being, remedy in a great measure, if not entirely, the anticipated evil.

Those who have a knowledge of the seaman's general characteristics, well know that when a cause acts to urge him to a change, he will effect that change at any hazard, perfectly reckless of after consequences, to himself or to the vessel he leaves. If he runs away from his ship in a foreign port, you may blot his name from the Register List; and considering the intemperate conduct of many of the masters, such must be looked for; for to my knowledge the seaman is often goaded on to a state of mind beyond which it is impossible for his nature to submit. Although our seamen are numerous, and necessity and inclination are constantly feeding the numbers, we cannot afford to dispense with any but the aged, and those of unredeemable character.

I have turned the subject over and over again in my mind, (which is constantly directed to professional objects,) and truly believe that such a provision as I have named would be found to work well, and become not alone conducive to the seaman's comfort, but often to the Captain's, even were the whole of two ships' companies to require an exchange: and I do not see any cogent reason against it, at all events it is worth a trial.

The withholding the ticket from the seaman should he commit a fault, unless he can show that he was not in error, carries great plausibility with it, and is expected to produce a good effect. No doubt it will to some degree operate well, but it may operate badly too. From a case which has very recently come to my knowledge, of a most arbitrary nature, if I knew not a multitude of other instances to guide me in decision, the difficulty of a seaman's bringing home a charge against the master, or of rebutting one brought by the latter against him, is very apparent to me.

As the clause now stands, the seaman would exclaim, "I am jammed in a clinch." "I know how the world wags, the weak go to the wall." "When the coast is clear I'll cut and run." This will be the consummation in many cases among the restless young men; the married men will probably endure much for the sake of their families, but the scales should be nicely balanced. Talk of the bad conduct of the seamen indeed! reformation is as pressingly necessary among the masters.

I rejoice to see those wholesome and most excellent strictures on the Merchant Service lately gracing the pages of the *Nautical*. The writer, whoever he may be, is entitled to the thanks of the whole profession, his observations are just, forcible and convincing, and a spirit of benevolence breathes through them, that redounds very much to his honour and heart. But to return: the boon of exchange would, in all human probability, remedy these consequences; but, if the clause be left to work out its own cure, it will perhaps be found that it must be given up ultimately. Then things will drop into their old course.

As the case stands at present, desertion will still go on, and this will often be brought about by the Master's own conduct; in effect he holds an iron collar round the seaman's neck, but unless he chains him to a ring-bolt, there is nothing to prevent the restless servitor from slipping from his hands. Well, he runs, and knowing that he will be refused another ticket, and that he cannot ship in a British vessel without one, what alternative has he, but to transfer his services to the Americans, whose ships are to be found in all parts of the world where English vessels resort to.

Besides, if a captain is debarred from shipping hands who cannot present their tickets, what a pretty situation he will be in, in a foreign port, supposing his crew or a part of it runs away. I do not know if there is a clause to meet such a contingency; if not, he must be content to take any foreigners that offer, if he can get them, or obtain men from the ships of war.

It is probable desertions will not be so frequent as before the Act came into operation, but we may reasonably believe that they will occur, and particularly in the American ports, whilst the seaman has not the privilege of leaving a disagreeable captain without the *dernier resort* of running away. I have done my duty as a patriot, to others must be left the decision.

Ice in the North Atlantic.—*By W. C. Redfield.*

Of the various dangers which beset the path of the mariner, perhaps there are none which excite to more vigilance than the known or expected proximity of ice. In some frequented portions of the Atlantic Ocean the ice appears almost every year, in the various forms of field-ice, floes, and massive ice-islands, drifted from the arctic regions by the constant action of the polar currents. These ice-bearing currents, in flowing towards the South, must necessarily incline towards the western limits of the ocean owing to the increased velocity of the diurnal rotation of the earth's surface, as we depart from the poles; a law well understood as regards the currents of air which form the trade-winds. Hence it is that on and near the Banks of Newfoundland these ice-currents are found to cross the usual track of vessels bound from the ports of Europe to Northern America.

The quantity of ice which appears on this route of navigation in different years, is exceedingly various. It is sometimes seen as early in the year as January, and seldom later than the month of August. From March to July is its most common season. It is found most frequently to the west of longitude 44°, and to the eastward of longitude 52°; but icebergs are sometimes met with as far eastward as longitude 40°, and in some rare cases, even still further towards Europe.

Experience has shown that the proximity of ice is far less hazardous than rocks and shoals; and this floating danger would be still less formidable were it not for the fogs and mists which it often causes. The thermometer has been often held up as affording sure indications of an

approach to ice, by the reduction of temperature shown both in the air and water, and these indications are important, and should by no means be neglected. But there may be many cases of approach to ice where a reliance upon the thermometer alone could not afford security.

[On the chart, which is annexed, to Mr. Redfield's paper, are indicated numerous positions in which ice has been seen and reported on the common route of navigation, chiefly since 1832. It extends along the east coast of Newfoundland, down to 40° N., and to 40° W.]

Although little or no ice be seen in one passage, or even in many times crossing the Atlantic, yet it has been frequently met in such quantities as seemed to indicate a vast, or indefinite extension of the ice-fields, towards the polar seas. And from the inexhaustibility of the sources of supply, and the permanent character of the polar currents, we may infer that there is no spot of ocean within the influence of these currents, which has not at some time been covered with ice.

A recital of the various authorities and marine reports from which our ice chart has been compiled, might prove more tedious than useful. The following, selected from many others, may serve as examples of the cases in which the ice has been noticed by navigators.

Ship Eli Whitney, Harding, April 7, 1836, sea account:—Wind S.S.W. and thick fog; ordered the temperature of the water to be tried every half-hour; at 6 P.M. water 36°; passed a small ice island; ship going west all night three knots; 6 A.M., water 34°; at 8 A.M., water 31½°, passed considerable quantities of ice. At 10 A.M., now a large field of ice a-head, which extended to the north and south as far as the eye could reach; entered it, in expectation of finding an opening to westward. After proceeding a cable's length, wore round, and stood out as we went in, and then hauled the ship on the wind to the S.E. Longitude by account, 47° 06′ W., latitude by account 44° 41′ N.—April 8, wind S.S.W., stood to the S.E. till 5 A.M.; water 46°; tacked ship to the westward. At noon water 44°; latitude by observation, 44° 35′, longitude by chronometer, 46° 56′.—April 9, wind S.S.W. and foggy. At 4 P.M., water 34°; wore ship to the S.E. At midnight water 44°; tacked ship to the westward. At 8 A.M., wind shifted N.W., and cleared off the fog; three large islands of ice in sight; water 44°; latitude by observation, 44° 17′ N., longitude by chronometer, 47° 50′ W.—April 10, wind N.W.; passed six large islands; water in vicinity of the ice 40°, latitude by observation, 43° 09′, longitude by chronometer, 48° 55′.—April 11, passed four large islands of ice this day; at 8 A.M., sounded and found bottom with 42 fathoms; water 35°; latitude by observation, 43°; longitude by chronometer, 50° 36′ W.

Ship Samuel Wright, Allen, March 18, 183–. Latitude 43°, longitude 48° 43′ At 8 P.M. very foggy, came nearly in contact with a very large island of ice about 150 feet high, and one mile in length; the weather extemely cold, kept the ship under easy sail. At 5 P.M. fell in with an English brig, and were informed we were standing for more ice, and that she had been for five days surrounded with it, extending from latitude 45° to 43°, and found no opening to the westward. Kept company during the night, and fell in with more ice; in the morning no ice in sight.

Ship Fama, Winsor, March, 183–, in latitude 44° 30′, longitude

48°, fell in with an immense field of ice; tacked ship to the eastward, and stood off and on two days. Wind changed to N.E., and run 45 miles S.W., and passed the point of ice in latitude 43° 25′ longitude 48° 50′.

The British Tar, Hanby, left the Gulf of St. Lawrence 29th June, and passed through the Straits of Belle Isle. On the 3d of July, about 15 miles eastward of Belle Isle, found the passage quite blocked up with very heavy fields of ice, which obliged us to put back to an anchorage. On the 6th again made the ice, and found it more open; passed through about seventy miles of it. On the eastern edge, fell in with nine brigs, a ship, and a barque, standing off and on, waiting for a passage into the Straits. The icebergs were very numerous and immensely large, as far to the eastward as longitude 48°.

Ship Oneida, Funk, May 4th, 1841, latitude 43° 40′, longitude 50°, passed a number of large icebergs; saw ice as far west as longitude 53°.

The brig Anne, of Poole, William Dayment, master, sailed from Greenspond, Newfoundland, [N.E. coast,] 19th of January, 1821, and in the evening encountered several floating islands of ice. On the following morning, at sunrise, the ship was so completely enveloped in ice that there appeared no means of escape, even from the tops of the masts. The ice, in its whole extent, rose about fourteen feet above the surface of the water; it drifted towards the south-east, and bore the ship along with it twenty-nine successive days. On the 17th of February, Capt. D. being 300 miles East of Cape Race,* in latitude 44°, 37 North, perceived an opening to the south-east, and succeeded in disengaging himself. From the 29th of January to the 3rd of February, the brig only made four miles a day; and during the 29 days this navigation lasted, he descried near 100 very extensive mountains of compact ice.

Ship Isabella, Meredith, struck an iceberg on the 9th of May, 1841, in latitude 42° 2′, longitude 43° 45′. The iceberg broke through the bows, and caused the ship to fill with water so fast that the crew had barely time to take to the boats, without water, provisions, or clothing: the ship immediately went down, or disappeared in the fog. The crew continued in the boat until the afternoon of the 11th, when they were picked up by the Kingston, of Hull, bound to Pictou.

Ship Lowell, on the 10th March, 1842, at 9 A.M., latitude 44° 15′, longitude 48° 30′, came in contact with a field of ice; was at that time steering W.N.W., with the wind. Tacked and stood to the eastward two hours, when she again tacked to the westward. At 2 A.M., again fell in with the ice. Continued beating to the southward, and falling in with the ice on the west tack till March 13th. Passed the southern extremity of the field in latitude 42°, longitude 49° 15′, having seen it extending in a N.N.E. and S.S.W. direction, nearly 150 miles.

A published letter from Capt. Hosken, of the steam-ship Great Western, says: "April 18th, 1841, the ship steering west, at 6 P.M., first saw one iceberg on the starboard bow, at 7h. 30m. passed it; at that time four or five others in sight; at 9h. 15m. P.M., passed several small pieces of ice,—slowed the engines. In a few minutes after, the ship was surrounded with light field ice, which appeared similar to a field I ran

* That this position was obtained by chronometer appears doubtful.

through on the 11th of February, 1839. This induced me to go slowly, with the hope of getting through, as I had done on that occasion; but by 9h. 30m. finding it closely packed, and much thicker prudence dictated our escape by the same channel we had entered. I then stopped and attempted to get the ship's head to the eastward, by turning ahead and astern until there was room for her to come round; in the course of this operation the ship had occasionally (at least) two streaks heel given by either wheel passing over large masses of ice. At 10h. 15m., succeeded in getting the ship's head to the eastward, and by 11 P.M., entirely clear. From that time went slowly, passing several icebergs; the night at times very clear, the aurora borealis very bright. At 3h. 30m. A.M., of the 19th again got embayed in the ice; stopped, hauled short round on our heel, and steered out E.b.S., coasting the ice for five or six miles. At 4h. 20m. kept her to the westward, running through innumerable icebergs until 8h. 30m., when we passed the last iceberg and field of ice."

"When the sun arose the ice was visible as far as the eye could reach, in an unbroken line from N.E.b.E., by the northward to N.W.b.W.; at the same time icebergs innumerable in every direction, forming one of the most magnificent sights I ever beheld."

"The first iceberg we saw was in latitude 43°, longitude 48° 30′; and the last in latitude 42° 20′, longitude 50°. I am quite sure there was an unbroken field of that extent, and from what I heard from Capt. Baily, of the packet ship South America, I have no doubt the field ice extended, with very little break, to latitude 40° 30′, where Capt. B. fell in with it on the morning of the 18th. Several other ships also fell in with it in the same longitude, and were completely stopped, giving them an opportunity of killing seals, which were on it in great numbers. Some of the icebergs I estimate at little, if at all less than a mile long, and from 150 to 200 feet high. This field of ice was in large masses, some of them not less than 20 feet square, by six feet thick, or more."

"The temperature of the water, when within two miles of the first iceberg seen, fell suddenly from 50 degrees to 36 degrees; air 40 degrees to 36 degrees. When in the ice, the water was 25 degrees, air 28 degrees; during the remainder of the night and following morning the water was not higher than 30 degrees, nor the air higher than 32 degrees. Immediately after passing the last ice, the water became 36 and the air 42 degrees."

Brig Cynosure, on the 23rd, 24th, and 25th of July, 1842, latitude 42°, longitude 49° 30′, saw large icebergs, and was two days among the ice. Saw an island of ice that was estimated to be 200 feet above the water, and saw several other islands in longitude 54°.

Ship England, Bartlett, April, 1842, latitude 41° 29′, longitude 49°, saw a large number of icebergs.

Brig Byron, Pierson, April, 1842, latitude 42° 18′ longitude 50°, saw four large islands of ice, one about 200 feet high and three miles long. Saw it 30 miles off.

British brig Peace, Robson, May 9th, 1844, made the ice in latitude 46° 52′, longitude 46° 30′, being bound to the Gulf of St. Lawrence, and was soon so completely imbedded in a large field of fragments that escape was impossible. She remained fast until the 13th without injury, when in the night a gale of wind set in, crowding the large cakes down

fast upon the sides and bulwarks of the vessel, which, from being in ballast, was soon stove in by the immense weight. On the 14th the small boats were got out and stocked with provisions, &c., and in the night of the same day the brig was abandoned. Captain R. with crew and boats remained upon the ice until the 18th, being unable to get into clear water, and on that day were taken off, in latitude 46° 50′, longitude 45° 42′, by the ship Copernicus, after much suffering.

Ship Burgundy, Wotton, in May, 1844, from the latitude 45° 30′, longitude 45°, to latitude 43° 30′, longitude 48°, was completely surrounded by icebergs and drift ice ; lay to four nights, owing to the density of the fog ; saw an iceberg two miles in length ; no ice seen on the banks.

Ship Virginia, Allen, latter part of January, 1844, was 34 hours fast in the ice. On the banks, in a hurricane, lost foresail and main-topsail, —saw large quantities of ice.

Ship Swanton, Heath, from 18th to 21st July, 1842, experienced thick foggy weather, latitude 43°, and longitude 49° to 54°, passed upwards of 300 icebergs, some of them very large ; came near being wrecked on them, having run between two large islands in the night, which nearly rubbed the ship on each side before we discovered them, notwithstanding all hands were upon the look out.

Captain William Weir, bound eastward, gave the following account. On the 9th of March, 1787, latitude 42° N., longitude 55° 40′ W., was called by the mate to see a large ridge of breakers : altered my course from E.S.E. to S., the appearance of breakers being N.N.E. and trending from E.N.E. and W.S.W. March 11th, latitude 43° 34′, found myself in the midst of a large body of ice, trending E.N.E. and W.S.W. ; soon got through. March 13th, latitude 44° 03′, at 8 a.m. made a large body of ice, extending beyond view from mast head, and trending N.E. b.E. and S.W.b.W. At 10 P.M., met a larger body of ice, which entirely stopped the ship's way. On the morning of the 14th found myself enclosed, and could see no water from mast-head, except one small hole, into which I pressed the ship ; in 23 fathoms water on the grand bank. In this dismal situation lay with my sails hauled up, till 21st March, seeing no sea from main-top-gallant-mast-head. On the 17th went on the ice to take a view of an island of ice which bore from us W.S.W. We set out at 12 o'clock, and travelled one hour and thirty-five minutes before, we reached it. We found it aground in 25 fathoms, the main body passing fast by it, setting S.E. two and a half miles an hour, as I judged. On our return, having been absent three hours, the ice island bore W.N. W., having altered four points.

On the first day of January, 1844, Captain Burroughs, in the ship Sully, met with an iceberg in the Atlantic, in latitude 45° longitude 48°. This is earlier in the winter than any other case which we have met with. Capt. B. states that he had met with ice near this position on the 1st of February, on a former voyage.

In September 1822, Captain Couthouy saw an iceberg aground on the eastern edge of the grand bank, in latitude 43° 18′, longitude 48° 30′. Sounding three miles inside of it, the depth was found to be 105 fathoms. In the month of August, 1827, the same observer, while crossing the banks in latitude 46° 30′, longitude 48° W., passed within less

than a mile of a large iceberg which was stranded in between 80 and 90 fathoms water. He was so near as to perceive, distinctly, large fragments of rocks and quantities of earthy matter imbedded in the sides of the iceberg, and to see, from the fore yard, that the water for at least a quarter of a mile round it was full of mud, stirred up from the bottom by the violent rolling and crushing of the mass.

On the 27th of April, 1829, Captain Couthouy passed, in latitude 36° 10′ N., longitude 39° W., (probably South of the gulf stream,) an iceberg, estimated to be a quarter of a mile long, and from 80 to 100 feet high. It was much wasted in its upper portion, which was worn and broken into the most fanciful shapes. In 1831, at daylight of the 17th of August, latitude 36° 20′ N., longitude 67° 45′ W., upon the southern edge of the gulf stream, he fell in with several small icebergs, in such proximity to each other as to leave little doubt of their being fragments of a large one, which, weakened by the high temperature of the surrounding water, had fallen asunder during a strong gale which had prevailed from the south-east. [Silliman's Journal, Vol. XLIII, 1842.]

Ship St. James, Meyer, July 12, 1844, latitude 44°, longitude 47° 12′, passed 12 large ice-bergs; July 20th, passed 25 do.; and July 21st, passed 30 do.,—latitude 43° 50′, longitude 52° 26′, saw the last of it.

Ship Formosa, Crawford, June 18th, 1842, latitude 38° 40′, longitude 47° 20′, saw an iceberg 100 feet high and 170 feet long.

(To be continued.)

On the Stationary Clouds of the St. Lawrence.

By William Kelly, M.D., Surgeon, R.N.

Stationary clouds are objects of attention wherever they happen to be observed. They are most frequently seen over mountains, and are properly regarded amongst the surest indications of approaching changes of weather. They are natural hygrometers, and shew pretty nearly the height in the atmosphere at which the temperature of the air and its dew point coincide; the plane of saturation, which is higher or lower, according as the mass of the air, is more or less dry.

Various modes of accounting for these clouds have been put forth from time to time, as any new fact in physics seemed to bear on the subject, but none of them are free from serious objections. The object of this paper is to propose an explanation, derived in a great measure from circumstances that attend low wet fogs, which depend on local causes, and differ from clouds only in their position. During the last sixteen years we have had repeated opportunities of observing the state both of the air and surface that attends these fogs, while employed in the survey of the Gulf and river St. Lawrence; and have ascertained a few facts connected with them, which I think may be applied with advantage in an enquiry into the causes of clouds in their nature equally local.

The low fogs, which depend on local causes, usually occur in fine

weather. We found that they were formed when the air was almost, or wholly charged with moisture; and when the temperature of the water, on which they rested, either exceeded that of the air, or was considerably below it.

Fogs formed by condensation of the vapour, that rises from water warmer than the air, are frequently seen in the Gulf of St. Lawrence; where fogs from an opposite condition of air and water are of rare occurrence. The difference of temperature in these cases is generally small, and seldom more than four or five degrees of Fahrenheit. We had frequently occasion to remark that these fogs were less dense at night than during the day; that they almost always begun with a breeze, and, up to a certain extent, became thick as the breeze freshened.*

The fogs, which are the consequence of a warm moist air resting on a cold surface, are met chiefly in the estuary, about the island of Bic, where, from local causes, the water is always cold. Between this place and the Gulf, fogs of the same kind occur, when calms succeed to gales, as the temperature of the surface water, on such occasions, sinks often below 40° in Midsummer. We also saw fogs from the same cause, in the strait of Belle-isle, where the temperature of the surface water is sometimes as low as 32° in July and August.

Contrary to the fogs over warm water, these are most dense in a calm; light winds too tend to dispel them; and we have never seen them continue when there was a fresh breeze. The temperature of the water was in every case considerably lower than that of the air: we found the difference often from 15 to 20 degrees of Fahrenheit, and seldom so little as five or six.

The first locality of stationary clouds to which I would direct attention, is over cataracts. These are of rare occurrence, as the vapour that rises from the cataracts is usually condensed in the form of a column of mist ascending from the water. I have had but two opportunities of seeing clouds in such a situation,—once over the Chaudiere, and once over the Montmorency Falls, two remarkable cataracts in the vicinity of Quebec. A column of mist is frequently observed over these cataracts as the Winter sets in; for at this season the water of the rivers is much warmer than the air, and the quantity of vapour given out by it is increased in these places, by its fall from a considerable height. On one occasion when the cold set in intensely at the close of November, in lieu of this column of mist,† a small well defined cumulus rested steadily over the Chaudiere Fall, at an elevation of three or four hour hundred feet. The sky at the time was clear; there was a fresh westerly breeze; the temperature of the air 4° Fah.

On another occasion, a friend called my attention to a light cloud resting over the Fall of Montmorency; while numerous similar clouds

* The temperature of the surface water in the Gulf of St. Lawrence, at a distance from the shore, does not suffer any material reduction from the agitation of the water by a moderate breeze; but it often sinks considerably in consequence of a strong gale, which mingles the surface water with the colder water beneath.

† This column of mist will be remembered by all who have visited the Falls of Niagara, where it is very remarkable.—Ed. N.M.

were borne past it by the wind. This occurred on an afternoon in May, with a fresh north-east wind, and after very heavy constant rain in the early part of the day.

In these cases it is clear that the vapour that rose from the falling water was precipitated by a cold moist wind. They also shew another fact of some importance in an inquiry into the causes of clouds, namely, that vapour has a tendency to rise perpendicularly from its source, and is not greatly deflected from that direction even by strong winds.

The clouds over mountains are either formed on the mountains' tops, descending more or less down their sides; or else rest stationary at some height above the summit. The first are frequently seen before or after heavy rain; the last usually in fine weather. With the first the sky is mostly overcast, with the last it is generally clear; or if there should be clouds over the plane country, they are lighter than those over the mountains, and at a much higher level. In places near the coast the clouds which envelope the mountains, wholly or partially, for the most part occur with a sea breeze; while those that rest over them frequently accompany land winds. These last may be often seen forming over the mountains to the north of Quebec on the forenoon of a fine day, remaining fixed in the afternoon, diminishing as the sun approaches the horizon, and disappearing altogether when it sets.

If we watch the growth of a cloud formed on a mountain's top, which we often can do from the time it commences, as a mere speck, we must suppose that either the cold surface of the mountain is condensing the vapour of a warm saturated air; or that a cold damp air is condensing the vapour that ascends from beneath.

A great objection to the first supposition is that the cloud is often accompanied by a fresh breeze; since such a breeze is most unfavourable to the existence of the fog, which depends on the precipitation of vapour from the air by a cold surface. A second objection scarcely less weighty arises from the difficulty of conceiving that the temperature of the surface of a mountain, free from snow, can ever be so much lower than that of the passing air, as it seems necessary that the temperature of water should be when the fog is formed over it; and it is extremely improbable that such should be the case when a cloud is formed during the day, after the surface of the mountain has been more or less exposed to the heating influence of the sun's rays.

On the other hand the probabilities are all in favour of the second supposition, namely, that vapour which rises from beneath is precipitated by a moist cold wind. First, the cloud is usually formed during a fresh breeze, which we find to be most favourable to the production of fogs over a warm moist surface; next the excess of temperature in the surface only requires to be a few degrees above that of the passing air; and, lastly, in the case of clouds altogether above the mountain there is no contact with the surface; while their permanence during the day, and their disappearance at night accord with what we have observed respecting the fogs over warm water; which although they did not disappear altogether during the night, became much less dense than in the day-time.

The analogies are all in favour of the supposition that the cloud is a consequence of the condensation of ascending vapour by a cold damp wind.

The next enquiry is for the source of the excess of vapour in this particular situation; whether it proceeds from the mountain itself, or is brought thither by the wind from the neighbouring plains or sea. To me it seems most probable that it is given out chiefly, or altogether from the mountain itself. In the first place it is evident that more vapour is given out by a mountain, than by any portion of level country equal in extent to its base; in consequence of the much larger surface for evaporation afforded by the elevated land; and the higher and steeper the mountain is, the more irregular cleft and broken in its form, the greater will the difference of surface be, and consequently the greater the amount of evaporation from it.* A second consideration is, that a portion of this surface is within or near the place of deposition. For with whatever celerity vapour may be diffused to a great distance under favourable circumstances, still as it chiefly spreads by the nascent vapour forcing upwards that which was previously generated must always be more dense near its source. It is true that the decrease of temperature that is due to height must cause some diminution of the amount of vapour, which would otherwise be emitted from the elevated parts of a mountain's surface; but, in allowing for this, it should be remembered, the cold observed in ascending a mountain is not owing to any thing connected with the surface, which receives the warming influence of the sun as well, and in some aspects better than the plain below; but to the winds that blow on it,† which are usually cold, partly in consequence of the inferior density of the air, but chiefly of its distance from the general surface of the earth, the great source of atmospheric heat.

Besides, it seems probable that the warmth of the ground favours the formation of ascending currents close along the surface of the mountains. By means of these currents much of the vapour exhaled by the mountain is conducted towards the top, and concentrated by the narrowing of the surface, as it approaches the summit.‡

In the last place the clouds over cataracts shew that any consider-

* When the tops of a range of hills are enveloped in a cloud, we often observe that it descends lower wherever there is a transverse section; probably because the evaporating surface is increased at that place. And when a cloud rests on a single hill, I have often remarked that it was lower in the clefts and ravines, than on the rounded side of the hill.

† At the top of Mount Tarn, at the southern extremity of the American continent, 2852 feet high, Capt. King, R.N., found the temperature of the air in an exposed situation to be 39°·5, its due point 36°. In a sheltered spot, close by (within 3 feet) the temperature of the air was 48°, its due point 41°. At the foot of the mountain the air was so dry, that no dew was deposited on the hygrometer, although the temperature was reduced 30°.

‡ On a small scale we sometimes see the vapour of an entire surface rise from the highest point or ridge of a wet substance.

In Dec. 1843, a very large man was suffering from inflammation of his leg, caused by a fall from his horse. The leg which was hot and much swollen, was covered with a wet cloth, and kept in a horizontal position, in a very cold room. The evaporation from the cloth seemed to have been all collected towards the ridge of the skin, from which it rose in a thin sheet of vapour. No *visible vapour* arose from any other part of the leg.

able excess of vapour, rising into the air at particular points, is not borne to a distance by even fresh winds; although there can be no doubt that the air becomes more moist in passing over sources of considerable evaporation.

Every thing that tends to saturate the general mass of the air with moisture, or to lower the plane of saturation, must contribute to the production of these clouds. This may be done in two ways,—either by adding to the vapour contained in the air, which happens when the wind passes over a warm moist surface; or by lowering its temperature to the point of precipitation, which often occurs when it passes over a cold one. In one or other of these ways we can always trace the connexion between these clouds and the sea breezes, during which they are so frequently formed.

Stationary clouds very analogous to those under consideration, are often seen over islands, when the sky over the sea is clear. But in these latter a new feature may be noticed; for we have seen them formed over the low islands of the Gulf of St. Lawrence, such as Anticosti, Prince Edward, and the Magdalens, almost as frequently as over the mountains of Cape Breton or Newfoundland.*

The clouds in many of these cases like those which rest over mountains in fine weather, were formed when the surface of the earth had been for several hours exposed to the heating influence of the sun; and were often seen forming towards noon, when fine warm weather succeeded to heavy or constant rains. We saw some cases of this kind at the Magdalen Islands, and could trace the growth of the clouds, from the first small speck formed over each of the islands of the chain.

On some occasions it would appear that the vapour given out by the heated land, was instantly precipitated by a cold moist breeze from the water; and then we saw a small island covered with fog, while the sea around was free from it.†

The depositions of vapour in these cases were formed over small islands, surrounded by a considerable extent of cold sea. The converse of this occurred in the next, where a small extent of cold water was surrounded by land.

In August, 1835, our vessel lay in Forteau Bay, in the Strait of Belliste. This bay is about three miles deep, and nearly the same extent in width. Its sides are formed of hills of sandstone, running almost parallel to each other, and stretching to some distance inland, forming a valley through which a river winds, and discharges its waters into the head of the bay. There had been heavy rain all the morning of the 31st., but the weather cleared up towards noon. A gale had set in from south-

* When seen near the horizon, they generally present the form of a cumuli; and they are so exactly over the land, that we could often infer from them how far, and in what direction a low island extended, while the land was still much below the horizon.

† This occurred at the small island of Bonaventure on the 28th of Sept. 1832. The island was clear all the morning, but was covered with a mist at 10 a.m., which thickened gradually, forming a dense fog in the afternoon. The sky was clear, with a moderate breeze from the south. The temperature of the air in the offing was 50°, the dew point 48°, the temperature of the surface water 48°.

west shortly before. During the afternoon low light clouds were seen constantly approaching the south-west side of the bay; they became less dense as they advanced over the water, and soon wholly disappeared. At the same time similar clouds were seen forming over the north-east side of the bay. We could watch their growth from the first small speck; and saw them increase in size and density as they drifted over the land to leeward. The clouds passed without interruption across the land at the head of the bay, and the sky over the land all round was thickly studded with flying clouds, while the space over the water remained clear. The temperature of the air on board was 57°, the dew point 56°, the temperature of the water 46.°5, the barometer 29.65.

On the following day we had again fog and rain in the morning, which cleared away before noon. In the afternoon the clouds advanced before the wind in the same manner to the S.W. side of the bay; were soon dispelled on coming over the water, and reappeared over the land to leeward, the sky over the water continuing clear all the time. The wind was very fresh from S.W., the temperature of the air 57°, that of the surface water 44°, the dew point 56°, the barometer 29.94.

I was very desirous of ascertaining the temperature and dew point of the air on shore, on both these days, but was unable to land, from the very heavy surf on the beach. It is probable, however, that they did not differ much from what was observed on board, as the vessel lay near the shore, and on the windward side of the bay. But when the air passes over any considerable extent of cold water, we often find not only that its temperature is lessened, but that the dew point also is lowered, though in a less degree.

In the valley of the St. Lawrence I have often seen clouds resting over the high lands all day, while the sky over the water was clear; and when night fell, the sky over the land became clear, while it became clouded over the river.

In all these cases the clouds seem to have been formed by vapour, that ascended directly from the surface beneath them. They were formed over warm moist surfaces, while the sky was clear over the colder ones. In regard to the clouds over the islands, when we consider that the surface of the land in the cases we have seen, had been heated by the sun, which has little comparative influence on the surface of the surrounding sea; that the waters of the gulf at no time attain a high temperature, and are often remarkably cold near the shores; that the land beside being wooded is in many places wet and marshy; that evaporation is very considerable from grass lands, and still more from marshes and forests; and finally, that these clouds are most frequent after rainy weather, which moistens the whole surface, there seems little reason to doubt that they are a consequence of the condensation of vapour that rises from the land by the cool moist wind from the water.

In Forteau Bay the dispersion of the clouds as they came over the water, and their reappearance over the land to leeward, can only be accounted for on the same principle. The plane at which the air was saturated with moisture, seems, in this case, to have been very low over the land, so that the vapour which was rising constantly from its moist, warm surface, was precipitated before it reached to any considerable height.

The clouds thus formed appear to have been borne along in this saturated plane, and to have been, in some instances, increased as they advanced, by fresh supplies of vapour from below. But on reaching the space over the water, which from its coldness has rather a tendency to abstract moisture from the air, than to yield any to it, the plane of saturation seems to have been more elevated, and the cloud, entering a comparatively dry air, was soon dissolved.

Even if any better mode should be offered for explaining the minute processes by which the clouds on these days were dissolved and re-formed, still it must be based on the principle of vapour rising from the land in greater quantity than from the water. In fact any evaporation from the water was wholly out of the question, as its temperature was from ten to twelve degrees below the dew point of the air.

The alternation of clouds over the land and river may be readily explained on the same principle. It is only necessary to remember that during the day the surface of the water is not nearly so much heated as the land, neither does it cool so much during the night.

STAR-GAZING.

SIR John Herschel, in his Treatise on Astronomy says, "Almost all its conclusions stand in open and striking contradiction with those of superficial and vulgar observation; and with what appears to every one, until he has understood and weighed the proofs to the contrary, the most positive evidence of his senses." This would be found true if we were only to take into consideration the earth itself; but how many thousands are there in this country that even do not go that length. When a love of science and the means of appliances for furthering its perfection are combined in one and the same individual, and that individual is of the aristocracy, our gratification is increased to admiration. Is it not, Sir, delightful and refreshing, when we are pained by hearing of the frivolous pursuits of monied men; their dissipation, and love of pleasure unintellectual,—to turn round and observe a nobleman devoting his time, his money, and his talent and patience to a mean for advancing our knowledge of astromomy? Such a nobleman is Lord Rosse, and such a mean is his "Monster Telescope," which it appears has at last been directed towards the heavens.

The slight glance which has been taken, and the objects reflected to the eye, serve to raise our curiosity exceedingly; and as our satellite, the moon, is so "handy," (only 240,000 miles distant), and "the eye can see a star so far off, that 200,000,000 of miles is not a measurable fraction of the distance," we hope to find Mr. Partington's words realized, viz.—"It is not overstraining the fact to say, that with the very best instruments, a portion of the moon's surface, 10 miles square, nay, *one mile square*, may be seen as minutely in proportion to its magnitude, as a surface *one inch square* can, by the naked eye, at the distance of one foot." Should this be accomplished with the Irish tube, we may,

perchance, catch a sight of the "man-in-the-moon" napping, or the vespertillio-homo taking his leap into the cool lake; fancies which however seemingly absurd, may not prove more extravagantly strange, than objects that the great telescope may present eventually to the philosopher's eye.

What has already been seen, does not place the nursery saying of the moon being made of "green cheese" in that ridiculous light in which it has been held, though, of course, its literality needs no defence. But, what though it turn out after all to be nothing more than a sort of huge paper lantern! a film—a gaceous body, Daguerreotypeing a part of the earth's surface upon its pale face, by the chemical action of the sun's reflected light? How surprised the nomenclators of its mountains, volcanoes, icy shafts, &c., &c., would be to find they had been only looking at pictures of Hecla, the Nimaloogah, &c., &c. The plastic nature of the mind's eye, and the ductile constitution of the imagination, have received much more extravagant impressions, than lie resolved in that fancy; and indeed from the transient view already obtained, we must prepare ourselves for wonders within the illimitable field of the heavens mystery not yet dreamed of!

On the 15th of March, Sir James South witnessed the occultation of a star of the 7th magnitude by the moon: this star "instead of disappearing the moment the moon's edge came in contact with it, apparently glided on the moon's dark face, as if had been seen through a transparent moon, or, as if the star were between me and the moon. It remained on the moon's disc nearly two seconds." The cause of this phenomenon, says Sir James South, is involved in impenetrable mystery, we hope only for the present. With his 12-inch achromatic he says an observer looks *at* the moon; with Lord Rosse's six feet telescope, he looks *into* the moon. Hence what discoveries may we not expect?

Marvellous rumours are afloat on this subject; it is said that Regulus is not a sphere, but a disc, the Nebula in Orion's belt, a universe like our own, with sun, &c.*

From your position in the scientific sphere, we hope, Mr. Editor, to see shortly, the sum of the discoveries made by the Irish tube, recorded in the *Nautical*.

To the Editor, &c. ATLAS.

NAUTICAL RAMBLES.—THE LEEWARD STATION DURING THE WAR.

Port Royal and its Associations.

(Continued from page 242).

WE had the gratification to see her at anchor, and spoke the force trader, who did not pass the Orange cays on that day: so much for trusting to opinion.

* Literary Gazette.

We heard the whole story. The Dons suspecting that we were watching for the Bungos, which usually convey the specie from Chagres to Porto Bello, wisely delayed sending it by such conveyance. But having ascertained that the brig had anchored at the cays, they instantly shipped it in a fast sailing schooner, commanded by a clever man, who, it has been shown played his part remarkably well, and which justified the confidence reposed in him by his employers. In order to complete the deception, they sent off a bungy empty, by the usual route, inside the Orange cays: she was caught by our launch which lay concealed in the mangroves, and stole out like a moving bush; a piece of salt fish, a yam, and a few conch shells was the reward of our cunning ambuscadoes; the brig being at this time off Porto Bello, getting her reward for her knowingness.

We shall add one or two more examples which occurred to this brig of war, and as the yarns are strictly professional, and the shore and expanse of sea to which these relate may be considered, in the language of polite literature, Nautico-classical, from the association of the name of Francis Drake, (a descendant of whom we had on board,) and other renowned and enterprising seamen, perhaps they may be tolerated by the reader, who may be fond of the romance of real life; and if he happen to be naval, he may find the time bestowed on the perusal not unprofitable, (which is our aim in these reminiscences,) as they embody serious points worth bearing in mind, and preserving for future use, for

> "Experience is a voice that calls attention,
> And when responded, robs doubts of apprehension."

There are two or three old adages, among thousands of others, worthy of every man's consideration:—1. "A bird in the hand is worth two in the bush. "2. "Do not put off till to-morrow that which may be done to day." 3. "Delays are dangerous." These may be strictly applied to the following case.

One morning, having rounded San Blas, with a fine top-gallant breeze, all eyes on the *qui vive*, a strange sail was announced to eastward; chase was immediately given. As we have already shown, fortune had been liberal to us so far in her fickle dispensations, as to throw an unusually propitious opportunity in our way of closing accounts with her. Unhappily her bounteous favour was beyond the deserts of persons either wilfully blind to, or sceptically perverse of her kind intentions; but as it was possible that a disappointment of such magnitude as that lately experienced, might operate to insure at least a more careful vigilance on any future occasion, those whose voice had no share in the production of the lamentable miscast, entertained sanguine hopes that that notorious deceiver, opinion, was left behind in the bush, in the Orange cays. We shall see presently how far these hopes were realized.

It was not long before the chase was made out to be a schooner, steering on a course which would lead her to Carthagena. In a little time we were near enough to send the usual messenger to tell our wishes: she rounded to, and up went a little yellow and red-striped flag. "Huzza, she's a Spaniard,"—aye, a Spaniard; 'twas but a very few days before we had a "galloon," (as Jack was wont to call 'em,) beckoning to us; "opinion," by way of a lark, turned her into a force trader: will that

necromancer be playing his trick with this, perhaps a "galloon" craft too? It was quite delightful to meet so many good tempered countenances as one walked the decks, as the above ejaculation escaped our oracles. But pleasant as such a sight is at all times and in all places, it may be taken for granted that the few who were too doubtful to smile, would have laughed right out, loud and strong, could they but have caught a glimpse of the thousands and thousands of dollars the Fates had deprived them of. Where were they at this time? They are a most circulating body. "Who knows," said our staid mate—"Who knows but some of those very dubbs may be stowed away in this craft".

It is surprising what a word, an idea, something unthought of will do. Even the doubters now smiled. My hopes, which had sunk to zero after the "naranjazo", as we called it, magically rose at these words of my messmate, and why? I knew that there was head, common sense, intelligence, perseverance, untiring zeal, professional skill and tact, a stout heart, and a ready hand (the other was shot through and useless) about him; besides, I was absolutely green enough to believe that the schooner and all in her, dollars "mucho muy mucho" of course, must needs, now that she was alongside, belong to us; and that scarcely any intervening untoward event could arrest her from us. How wise we are in our conceits! But I shall not anticipate. This was an incident that had enough of romance in it to make it agreeable to the young mind imbued with the exciting tales of other times; and the atmosphere was the very same which the wild and lawless heroes of old breathed, but there was this redeeming difference between our pursuits and theirs, we were lawful plunderers, they, in the majority of cases, marauders without right, principle or humanity. Alas! for the Spaniard, from the first essay of this adopted explorer, to the period when the spirit of Revolution rushed with the wild career of a whirlwind over the western world, nor peace, nor quiet knew he!

What are man's aspiring designs? What his will, his consummate arrogant exercise of power, his grinding inhumanity to his kind, his lust of gold, his pride upholding vain-glory? What are all these? Will they avail him aught when the decrees of heaven cry aloud for vengeance? What is he? A feather borne by the blast, an abject, paltry thing, crawling in the dust of his own creation. A lesson and a moral for succeeding ages? Let the haughty Castillian answer.

But turn we to our own salt-water sphere. What is in a sailor's life to wed him to it? What is there amid the world of blue waters. Now calm and still as the deep sleeping plain of some iced and wide extended Arctic lake; now furrowed up into black and sparkling ridges, rushing with the impetuous propulsion of eagle's wings, maddened as it were, into strife, by the mysterious breath of the sightless wind! What is there in these transitions to rivet him to his aqueous home? Are these the charms:—now scorched by a vertical sun; now shivering in the polar blast; here imploring heaven for one drop of the colourless liquid wherewith to cool his parched tongue; now dripping in the copious tropical shower; here craving one fresh morsel to mitigate the briny fervour of his salted palate—anon feasting to satiety upon the dainty turtle; now with spirits elate, nervous and strong, and resolute amid the din of of the battles roar; and, is it a dream? sinking, helpless as a new-born

infant, into the arms of Death, yellow and inanite! Good Heavens! by what fatality are men bound to such a state? The question is not mine, it is the shoreman's. We could answer him in full, but he would not comprehend our nautical logic; with the substitution, therefore, of a word or two, and for the reason that, it will occupy less space, we shall merely add, as a *quid* (he is at liberty to *chew* it) *pro quo*, six lines of the noble bard.

> "The sailor wends through many a pleasant place,
> Though sluggards deem it but a foolish chase,
> And marvel men should quit their easy chair,
> The toilsome way, and long, long league to trace;
> Oh! there is sweetness in the ocean air,
> And life, that bloated ease can never hope to share."

The mate was sent on board the prize, which lay with her sails down, a few fathoms off, to overhaul her; and he was directed to send the master of her on board the brig. He was soon upon her deck, rather independently making his salaam, and mouthing the universal first compliment of civilization, "Buenas dias." All eyes were, of course, fixed upon the stranger: he was a young man, swarthy, and wearing a bold determined air. His costume was that generally worn by the Spanish seamen—a broad wove straw sombrero, brown jacket, and striped trousers. The whisper instantly went round "He's not a Spaniard."

Old "Soundings," (a Yankee,) having led a very roving life had obtained a patent from Neptune, as "Maestro de lengua," *patois*, of course, like my essays! He was very fidgetty, now lengthening his neck half a fathom, throwing forth one of his broad stares, which he thought must confound the most resolute, now drawing up, uttering a sonorous hem, "Aye! aye! we shall see." The stranger gazed in his turn, and knit his brow, squirting the tobacco juice out of the port by which he was standing, and thus looks were exchanged for a minute or two, Muta having thrown her spell around. It was a strange sight; I began to wonder what was brewing, and could not help fancying the confounded necromancer "opinion" which had so strangely deceived us already, was about to play his tricks again, when our old Yankee advanced a step and addressing himself to the erect figure before him, said sternly, "Are you a Spaniard!" "Si, Senor, como veis;" was the ready answer. "Oh? you understand English then?" "Yes!" was the laconic reply. "Ah! what's your cargo?" "Oh! nothing but cocoa-nuts." "Cocoa-nuts! cocoa-nuts!" "Psha!" repeated simultaneously by the standers-by. The captain laughed and turned upon his heel, then, as if a sudden thought had struck him, jumped upon a gun, and hailed the schooner. "Mizen, what has she got in?" The schooner had drifted to some distance from the brig. The mate putting his hand to his mouth as a substitute for the trumpet, replied, "Chock up to the hatchway with cocoa-nuts, Sir, unhusked: there are two carronades unmounted on deck." "Ah!" said the captain, "No doubt she was going to fit out at Carthagena as a privateer;" stepping down, he addressed himself to the supposed renegado:—"Cocoa-nuts are rather a light cargo, I suppose you have some silver bars by way of ballast?" The grinders were at work upon the tobacco, and relieving his mouth of the juice, he replied with a shrug, and a very significant turn up of the lips.

"Diablo! no, we have sand for ballast, but I don't know whether there's any gold or silver dust in it." "You were going to fit out as a privateer?" "Oh! I'm sure I can't tell you that; she's not much fit for it, and if she was, where's the money to come from. She belongs to a poor fisherman of the Bastimentos," "What are you doing in her?" "As to that, Senor, I am on business from Panama to Carthagena; but I could get no conveyance, so I volunteered to take this craft for the poor old Pescador, who wished to sell her for what she would fetch—she's not mine, I wouldn't give a marvedi for her."

It was curious to observe the different effect produced on the individuals of the group gathered round the doubtful Spaniard. Expectation seemed struggling with disappointment to frame opinions, but none were openly expressed, because, perhaps, the circumstances of the case appeared too equivocal to admit any of the party offering a suggestion. Neither was it possible to divine from any expression of the countenance of any one, what was passing within the *sensorium commune*. This state of inaction of the faculties may, not inaptly, be likened to the perplexing condition of the weather, when cat's paws rise up successively from all points of the compass, but will not fix in any quarter. I was gazing, being too insignificant as a stripling to be mixed up in the consultation, with that vacant stare of wonder so often noticed in the simple open-mouthed rustic as he looks upon the farcical, but to him most surprising feats of Punch and Judy! and I was just revolving in my mind whether, if it were possible to instil somewhat of the energy and activity, without the volubility of the notable pair, into our actions we should not be likely to secure a good prize, when, my reveries were cut short by an order to go on board the schooner and assist the mate in examining her.

This, like a smart box on the ear, put new life into my flagging soul, and I was presumptuous enough to think, as all giddy things are apt to do, prematurely, that the spirit of the Cays had been laid* at last!

(To be continued.)

Description of Lights on both sides of the British Channel.

Hythe, near Southampton, 26th, 1845.

Sir.—Having often felt the want of a table exhibiting at one view the height and position of the various lights in the English Channel and West Indies, I presume the enclosed will be found useful by many who are not furnished with all the information required on this subject. The lights on the English coast are taken from McCullock's Dictionary, according to the official statement published by the Admiralty, with a [illegible] exceptions, and the lights on the French coast from the "Description [illegible]ire des Phares et Fanaux allumés sur les côtes de France, au 1er, 1840," published at Paris in June, 1840; longitudes reduced to [illegible]an of Greenwich. The position and description of the lights [illegible]st Indies are principally taken from your valuable Magazine.

[illegible]nder foreigners are puzzled with our language, as a y. e., there are no definitions to this single Anglo-Saxon word.

I have added Rio's table for ascertaining the distance from the visible horizon to the observer, according to the elevation of the eye, and to other objects according to the heights depressed under the same level, to afford a ready means of ascertaining the distance from the light when first seen.

If you consider this worthy of a place in your valuable Magazine, you will do me a favour by inserting it at your earliest convenience, if not, please to return it with any remarks you may be pleased to make.

I am, &c.,

JOHN MCDOUGALL,

Late Commander in the Service of the Royal Mail Steam Packet Company, and by appointment of the Court of Directors, Examiner in Navigation and Seamanship of the Officers of that service.

To the Editor, &c.

Distances from the visible horizon to the observer, according to the elevation of the eye above the sea, and to lights or other objects according to the height depressed under the same level.—*From Mendoza Rio's Tables.*

El. in ft.	Dist. in miles.	El. in ft.	Dist. in miles.	El. in ft.	Dist. in miles.	El. in ft.	Dist. in miles.	El. in ft.	Dist. in miles.	El. in ft.	Dist. in miles.	El. in ft.	Dist. in miles.	El. in ft.	Dist. in miles.	El. in ft.	Dist. in miles.
1	1.149	21	5.263	41	7.354	65	9.259	165	14.753	265	18,696	370	22.092	570	27.420		
2	1.624	22	5.387	42	7.443	70	9.609	170	14.974	270	18,872	380	22.388	580	27.659		
3	1.989	23	5.508	43	7.531	75	9.946	175	15.193	275	19.045	390	22.681	590	27.897		
4	2.297	24	5.626	44	7.618	80	10.272	180	15.409	280	19.218	400	22.970	600	28.132		
5	2.568	25	5 742	45	7.704	85	10.589	185	15.621	285	19.389	410	23.255	610	28.365		
6	2 813	26	5.856	46	7.789	90	10.896	190	15.831	290	19.558	420	23.536	620	28.597		
7	3.039	27	5.968	47	7.874	95	11.194	195	16 038	295	19.726	430	23.816	630	28.827		
8	3.248	28	6.077	48	7.957	100	11.485	200	16.242	300	19.892	440	24.091	640	29.055		
9	3.445	29	6.185	49	8.039	105	11.768	205	16.444	305	20.057	450	24.363	650	29.281		
10	3.632	30	6.291	50	8.121	110	12.045	210	16.643	310	20.221	460	24.632	660	29.505		
11	3.809	31	6.395	51	8 202	115	12.316	215	16.840	315	20.384	470	24.899	670	29.728		
12	3.979	32	6.497	52	8.282	120	12.581	220	17.035	320	20.545	480	25.162	680	29·949		
13	4.141	33	6.598	53	8.361	125	12 840	225	17 204	325	20.705	490	25.423	690	30.168		
14	4.302	34	6.697	54	8.440	130	13.095	230	17.418	330	20.863	500	25.681	700	30.386		
15	4.448	35	6.795	55	8.517	135	13.345	235	17.606	335	21.021	510	25.936	710	30.602		
16	4.594	36	6.891	56	8.595	140	13.605	240	17.792	340	21.177	520	26.190	720	30.817		
17	4.735	37	6.986	57	8.671	145	13.830	245	17.977	345	21.332	530	26.440	730	31.030		
18	4 873	38	7.080	58	8.747	150	14.061	250	18.159	350	21.486	540	26.689	740	31.242		
19	5.006	39	7.172	59	8.822	155	14.299	255	18.340	355	21.639	550	26 934	750	31.453		
20	5.136	40	7.264	60	8.896	160	14.527	260	18 518	360	21 791	560	27.178	760	31 662		

EXAMPLE.

Observed Abaco light dipping in the horizon from a position aloft, 40 feet above the level of the sea.

	miles.	dec.
Height of Abaco light above the level of the sea, 160 feet	14	527
Height of the eye above the level of the sea, 40 feet	7	264
Distance from the light	21	791

[The resulting distance from the light, "21·791," should be increased by a twelfth part for the effects of refraction, making it 23.607 distant; and this should be observed as a general rule.—See Raper's Navigation.—ED.N.M.

WEST INDIA LIGHTS.

Name of Light.	Latitude. North.	Longitude. East	No. of Lt.	Colr. of Light	Nature of Light.	Height above H. W	Description.
	°					feet.	
	5	42 37	26 00	1	w fixed	30	light vessel
	5	46 35	5 00	1	w „	30	—
	5	43 38	14 30	1	w „	100	lighthouse
				1	w „	128	„
	5	50 29	55 36	1	w „	108	„
	5	48 24	53 20	1	r „	95	„
	14	27 26	12 15	1	w revol. 2½ m.	244	„
	24	29 32	21 36	1	w „ 1 m.	126	„
	24	29 50	27 58	1	w fixed	100	„
	25	30 24	19 00	1	w revol. 1 m.	80	„
	25	30 27	3 10	1	w „ „	160	„
	25	31	21 30	2	w fixed	72	„
		0			w revol. 1 m.	96	„
		2 30	4	1	w inter. 46s.	79	„

We have omitted the notice of Channel Lights for the reason given in our

The following particulars relating to the wreck of H.M. [illegible] witness.—The *Skylark*, 2, Lieut.-Com. G. [illegible] Portsmouth on Thursday, April 24, with sixty-eight [illegible] Portsmouth, which, together with her own crew [illegible] Portland lights on the morning of the [illegible] became very foggy. At a few minutes after ten [illegible] going about four and a half knots, with top-gallant [illegible] immediately made to put her about, but [illegible] struck, and would not go about. [illegible] the hands were turned up, and [illegible] however was ineffectual. About [illegible] the ship was found to be within [illegible] could hear voices from [illegible] was answering to their assistance from the [illegible] was just hove overboard, and an [illegible] her and haul her off; at this [illegible] immediately set to work at the pumps, [illegible] on the rock, soon left her with [illegible] and three-quarters of a fathom in the [illegible] She had run ashore on Coalpit [illegible] eastward of the tower which [illegible] There was not much wind [illegible] in shore.

[illegible] was towing the brig under the guidance [illegible] which had been got out to com- [illegible] besides the boat's crew, was the Com- [illegible] Master Morris sank several [illegible] were no more alive when one of the [illegible] Crawley, swam out to him and sup- [illegible] at the imminent risk of [illegible] saved them all, and returned to the bay with [illegible] cutter was then hoisted out, and filled with men, after [illegible] who were safely landed on the shore of the bay. Lieut. [illegible] landed the Commander's son and the boat's crew, returned, [illegible] as the breakers would admit, and put one of his

men in the *Skylark's* "dingy," who directed two boys who were in her to put her alongside the lee-quarter of the brig. They did so, and took in six men, and put them on board the coast-guard boat, but Lieut. Smith, observing the awkwardness of the boys in the dingy, put two more of his men in her, who went to and from the stranded brig in a most dexterous and intrepid manner, bringing each time as many of the brig's crew as the dingy could safely hold, and placing them on board the coast-guard vessel, until it was full; when it pulled away with them for the bay.

The tide having gone down, and the surf decreased in violence, the dingy was enabled to land her men on the ledge, which was but a stone's throw from the brig's bows, until nearly all were landed. A boat, the Bee, of Weymouth, then came alongside and took the rest of the crew and the master out. Commander Morris having the gout in one of his legs, and having used almost super-human exertions to save his ship, was quite exhausted when the last boat went alongside; so far, indeed, was his strength prostrated, that he was incapable of getting into the boat to save himself, and was thrown overboard, and picked up by the first gig. Lieut. Smith had returned in the meantime, and advised the officers to send the cutter off to the wreck to endeavour to get some sails and spars wherewith to make tents for the men, as the tower was not large enough for them all to sleep in, and also to save as much from the wreck as possible, as it appeared most probable she would go entirely to pieces when the tide flowed, and offered to assist with his men and boat, which was thankfully accepted. Accordingly, every exertion was immediately used, and a great quantity of the sails, spars, provisions, and some of the officers' property was got ashore. Commander Granby arrived from Swanage bay in his tender, the Gertrude, in the afternoon of the day (having received information by express from Lieut. Smith respecting the wreck of the *Skylark*,) and immediately took his boat to the brig and rendered all the assistance in his power. By 10 at night, the wind still blowing fresh, the Gertrude had a great quantity of stores, arms, and some of the officers' goods on board, with which she got underway, and after considerable danger and difficulty, cleared the ledges and safely got into Swanage bay with them by 12 at night.

On Saturday the brig still held together, although the wind had amounted to a gale all Friday night. On Sunday part of the deck and several articles of stores were washed ashore. On Monday, the gale having continued with unabated violence during the whole of Saturday, the boats put off and succeeded in bringing the yards and spars ashore. This morning (Monday) Mr. Brown, the Assistant Master-Attendant of Portsmouth Dockyard, arrived from Swanage bay, in the *Echo* steamer, and in the evening the supernumeraries brought by the *Skylark* were sent to Swanage bay and embarked on board the *Echo*, for conveyance on board the flag-ship at Portsmouth, as they had been disgracing themselves in their awful position by getting drunk and riotous in the adjacent village of Kimberage. On Tuesday the boats were engaged nearly all day, the weather being comparatively calm, and succeeded in saving some of the tanks and other stores.

The officers and crew are still engaged in endeavouring to save all possible, and will not leave the place until the wreck has been cleared of everything of value.

A ship got ashore on the same day as the *Skylark*, near Portland—all hands perished; another the same day, near St. Alban's, crew not yet heard of."

A court martial held at Portsmouth on Lieut. Morris, the officers and crew of the *Skylark* acquitted the Commander, Lieut. Morris, of all blame as well as the crew, and dismissed from H.M. Service the Acting Master Mr W. H. Crane for not having hove the lead.

China :—Visit to Amoy.

The thermometer was 85° in the cabin of the *Mercury*, which was small and unventilated, when I started on the 20th of July, for Amoy. My private cabin, for which I paid £17 to go 330 miles, was the size of a wash-place under a stair-case, but not so airy, and had the advantage of being previously occupied by a fine race of cockroaches. You can suppose my passage to Amoy none of the pleasantest: but there was some amusement to be found among the passengers and the people. The master (Extortionate W. Esquire) had his wife on board, who lived in the stern cabin, divided from the aforesaid cuddy by a very audible partition. They are certainly the worst hands at Calcutta in arranging a ship. Two Roman Catholic padres were going with their servants (not at the rate of £17, I think) from Manilla, where they had been educated, to Amoy, and afterwards to penetrate into the interior. The first mate, an Englishman—the second mate, a Spaniard—completed our mess. I made a plunge at the padre. "Bon jour, Monsieur."—"Monsieur," said he, touching his hat.—After floundering a little, I found he could not swim better in French than I could. Both the padre and the camarade understood Chinese. We talked every evening after the sun was down, and every morning before it was up. But in the middle of the day the sun was the most unbearable thing I ever met with. I could do nothing but watch the junks from the shady side of the vessel. The junks and fishing boats are the most unsightly monsters of the deep. A Siamese junk is as big as any two English vessels. I also discovered that the kit of a Spanish sailor consists of two blue jackets, with velvet collars and cuffs, a coloured silk handkerchief, 35 waistcoats of various patterns, and two striped shirts. We had on board ten Manila Spaniards and five Chinese sailors; and the master having to talk ten too many languages, sometimes confounded two or three together.

When he went to dinner, he attacked the old padre,—"Signor, voulez vous de los Pescadores?"—The padre replied, "Gracias, Signor."—Does he mean yes or no? I forgot my French, when I began to learn Spanish. Then he attacked the camarade :—"Signor este de pescadores, este de currie, este de vino, este de boire." He meant beer. "De suez" (which is water in Chinese), or "voulez vous de fowls."

After floating along the Chinese coast for five days in a broiling calm, we picked up a refresher at Chapel island, and flew before the wind to the great arm of the sea, where, among many islands of all shapes and sizes, lie the celebrated ones of Amoy and Koolongso. I afterwards found I ought to have been glad to have got there at all; for in spite of a pagoda on a high hill, more ships miss the harbour of Amoy than any other on the Chinese coast. Supposing Amoy to be South Shields, Koolongso is Tynemouth; and the "swells" of Amoy have their country-houses and gardens at Koolongso, where they go to enjoy themselves during the season. It has two very pretty villages, with ornamented Chinese houses and gardens, and a walk all round the island, a juvenile race-course, a fort, a "public" called Prince Albert's Hotel (where you may get anything, from cool ginger-beer to a drove of oxen), and it is an excellent bathing-place.

I and my host, a brother officer, started to see Amoy and Koolongso. We crossed the narrow channel in one of the many ferry-boats that are always plying between the town and the island, and immediately found ourselves in a scene that would not have disgraced London. Junks of enormous size, from Japan and Siam, lying five or six deep, loading and unloading, innumerable boats, rowed by one or two men at the stern, and rushing about with bales of goods in all directions, and landing them on jetties, where the hairy-backed copper-coloured porters seize them, and bear them off at a

great pace down narrow alleys. No loitering; everybody "going the pace;" everybody doing something, and all talking at once. We went up one of these narrow alleys, and dodged our way up stairs into the loft that forms the consulate of Amoy. The streets are like the courts you meet with in parts of London, flagged all across, and with shops on each side; but you walk under an arcade of matting all the way, spread across from house to house, which would make it very pleasant, were it not for the compound of villainous smells, that would knock an English lady down. The Chinese, you see, are partial to good eating, and to pork fat especially, which they mix with everything; consequently all the eating-houses, every few yards in Amoy, are saturated with pork fat,—which, in a temperature of 90, after a day or two, is not so agreeable as your garden,—and this is only one of the thousand perfumes of Amoy. But if you can stand it, we will make a start. This is Regent-street,—only eight feet wide, however, instead of eighty. Here you see the warehouses and counting-houses of the great merchants close to the river, one story high; and they look as if they were built upon the flood. Here you may look in (there are no glass windows to rub your nose against) and see two or three odd fellows, in long white coats, making their bargains over some tea. Here is an itinerant doctor in spectacles selling drugs and nostrums with a loud voice. Opposite a painter doing the barbarous in Indian ink and red paint, at the rate of two drawings in a minute. These two, with their attending crowds, block up the way. But you can't stop, for "Hai, hai, hoe, hon;" here comes a fat mandarin in his sedan chair, carried at a trot by two copper-coloured Coolies. That's Shoe-lane on the left, a Chinese Castle-garth. Here we come to Regent-circus, a dirty old joss-house, with a fruit-stall in front. Now we are in Oxford-street, which I am sure is a mile long, and leads into the city. Here an umbrella shop; two or three tin shops; a mat shop, where fans and mats are displayed; an apothecary's, with his coloured jars and drugs. That street is filled with china shops; here a row of upholsterers; another of coffee-makers. This is my friend Akkam's silk shop; and there's a carver in buffalo's horn; a maker of incense sticks and paper to burn in their temples; half-a-dozen fruit shops; a bookseller; every shop full of its goods, and every shopman hard at work making more. Coolies trotting up and down with tremendous loads; and everybody talking at the highest pitch; and all this going on in an alley six feet wide. Stopping short of the Pantheon (an old joss-house,) we turn into Rag Fair; that is, if you have not fainted with the perfumes of Oxford-street. There goes a hot meat-tray down the street. What a delicious odour for a covered alley, with the thermometer at 92°. But it is nothing to Rag Fair. If it were a little less knock-me-down, I am sure ladies would not get out under a small fortune.

In every Chinese town, of any size, there is a part walled in, called "the city," and it is appropriated to some authorities, and some soldiers, and some old inhabitants. The city of Amoy is inhabited by an old race of bow-and-arrow makers, and the admiral. There was a travelling show when we were there. The street leading from the water is peopled by lantern-makers, glaziers, (who make capital windows of oyster shells), pipe-makers, carvers and gilders. The carving and gilding in those joss-houses is admirable. And now we are in Regent-street again; and now you must be as tired with the description as I was with the reality.

On my return I was introduced to Mr. Enkeat, commonly called Cat, celebrated for being the only Chinaman who would undertake any work for the English in Koolongso. "Mr. Cat, here's Mr. C." "Hih yah!" cried Cat, with a broad grin; "he too muchee allo same facee as Cappen C." So Cat and I were on intimate terms from that moment. "Cat, I want to go to the Pescadores." Cat laughs, and asks suspiciously, "Humbug?" "No humbug: can I get a junk to go there?" "Can," said Cat. "How many dollars will do?" said I. "Can see, can sabbey," said Mr. Cat, judiciously. Next

morning Cat made his appearance; and having gone to a well-known cupboard, and helped himself to a glass of water and a cheroot, he introduced a master of a junk, who wanted me to pay £10 for his vessel; but I became economical for once, and declined.

This sort of thing went on for some days, and in the mean time my friend and I made an excursion in his boat up a river. We crossed a great arm of the sea, and passed an island with a pagoda on it, and found ourselves on a lake of great size, and bounded by the same steep, high hills we have at Hong Kong. Having crossed this also, we entered the narrow channel of a river, whose banks were as flat as could be, and extended for several miles on each side a raised dyke, run along each bank; and the rice fields on each side were below the level of the river. Here and there small patches of trees enlivened the scene; but the only variety on the banks was an occasional sentry-box on each side, and the number of heavy-laden boats going up with the tide. As we advanced, the houses on the banks grew more numerous and more picturesque, the trees handsomer. Ferry boats, cram full of people, passed in different directions, and branches of the river went off each side, and the boats appeared to be sailing among trees and fields. The wind and tide were in our favour, and it was none of your fine sunshiny days, but a pleasant cloudy day, likely to rain. About twenty miles up the river, we cast anchor, opposite two or three very pretty ornamented Chinese houses, close to the water edge, among laurels, weeping willows, and bamboos, overhanging the water. The reach of the river stretched away to a small town among the trees, and the high broken mountains filled up the background. We did not land, because our authorities here have made such violent proclamations about officers penetrating into the country; so having made a sketch of the place, we went down again. The rest of the time was spent in sketching among the picturesque rocks and trees of Koolongso, and riding round the race-course.

One afternoon, by the greatest good-luck, the steamer *Vixen* came in from Chusan, and the captain agreed to give me a passage to Namoa. Before the steamer started, we all made a formal visit to two of the authorities at Amoy—the Lord Mayor and High Sheriff. The consul sent our cards the day before, with each man's style and title. The Lord Mayor lives out of town, and has a very good paved road to his house. We went through first one open gateway into a court-yard, and then another, and up a flight of granite steps; and at the end of a hall, paved with tiles, and quite open on the side, about 30 feet by 20; no ceiling, but the beams and rafters gaudily painted, and inscribed with the Lord Mayor's titles in gold. At one end stood a table covered with red cloth, with writing materials on it: this was the hall of justice. An intricate passage led from this hall to another, which had chairs as a private sitting-room:—the raised dais contained incense jars. The Hi Hong offered us snuff, and knew my name by my likeness to my brother. After partaking of tea with no taste in it, we departed, through the great gates, to the Towtoo's or High Sheriff's. who received us with great ceremony, dressed in his conical cap of office, with a red button and red tassel, and a gown of dark, figured, stuff-like muslin, with a belt of precious stones round his waist, and a cornelian ring on his thumb, and black satin boots, and surrounded by attendants in conical caps and white robes. He was not so good-looking as the Hi Hong, who is quite a gentleman. They were both very inquisitive. Hi Hong returned our call.

The next night the steam was up, and at daylight on the following morning we were all on the look-out for any thing in the shape of a brig. We found her in Namoa bay, and very soon Capt. G. cried out, "There's your brother coming in the boat;" and I took a look at him through the telescope, and found him very like the same I had parted with four years before. His ship is as ugly a one as you would wish to see, but I must say, she has *been a home* to me in China. There is not much of a man-of-war's neat-

ness, because with him the service is everything, and carried forward with his characteristic impetuosity, through sunshine and rain, over every obstacle, in any ship, boat, or conveyance, with his crew, or by himself, in a full dress coat or a flannel jacket. I had a cot slung in his cabin; and notwithstanding the uneasy vessel landed my cot pretty often on the table, I have not enjoyed myself so much in China. I had an opportunity of seeing the indefatigable way in which he goes to work. I first went out with him and two assistants in search of a rock, supposed to be in the middle of the harbour; and afterwards we were off some rocks outside the Formosa channel. On an island we were surrounded by a group of copper-coloured fishermen, naked, and apparently as uncivilized as any people on the face of the earth; and this is a country boastful of a regard to decency. We were driven in by bad weather, and lay a week with the opium-clippers,—who are very intelligent, civil fellows, whatever may be said of their trade. My brother is looked up to as a benefactor by all of them; for he is not only making surveys for their advantage, but he supplies them at once with all the information in his power; and as they are almost the only means of communication along the coast, and they are constantly communicating, he receives many advantages for his attention.

Although I was beyond my time, I believe both of us heartily wished the clipper would be detained that was to take me down. And the report of a barque from the northward was received with gloomy looks on board. But in she came, and down we rattled to Hong Kong before a north-easter; and (I suppose through my brother's interest) I was most hospitably entertained, and had *not* to pay £17.

Capture of the Brazilian Slaver, "Albanez," 250 tons, with 743 slaves on board, by Lieut. James A. Dunbar, H. M. brig *Albatros*.—

Ascension, March 16, 1845.

On the morning of the 28th of Feb., in lat. about 9° 20′ south, and long. 12° 30′ east, a sail was seen from the mast-head. All sail was made in chase, but the wind fell light, and shifted to the point in bearing of chase, and finally died away at 9 A.M. She was made out to be a brig, the heads of her top-sails being seen from the mast-head, and her distance guessed at about 25 miles; land, and even smoke were seen in the same direction; and the look-out suddenly loosing sight of her, concluded she was on fire, and reported accordingly. The pinnace, armed and provisioned for three days, was sent out under the command of a Lieutenant, with instructions to bring back the figure-head, or some other portion of the wreck. Notwithstanding that the prevailing opinion that she was on fire, this Lieutenant was certain that the smoke did not proceed from her, but accounted for her disappearance by her having got into a bay, or under a point of land. The pinnace had got about five miles from the ship, when a light favourable breeze sprung up, and, notwithstanding the latter was under all sail, she contrived to double her distance by dark. Not a vestige of the chace was there to be seen, and the want of knowledge of localities, and the wish to avoid an alarm, induced the Lieutenant to anchor in 10 fathoms, supposing himself to be within three miles of the shore. At daylight the pinnace, then found to be six or seven miles from shore, was got under oars and canvas, and having got a few miles nearer, discovered the brig at anchor off the bar of the Coanza river. (She was soon after descried from the ship at anchor a few miles to the southward, which latter immediately wayed and run towards her.) The Lieut. seeing some boats and lumps round the vessel, concluded she was a regular trader taking in cargo; but when a little closer, rafts crowded with slaves, and laden with large casks of water, threw a different light on the affair, and the pinnace seemed to double her speed.

Shortly after boats were seen to leave the bay, and make across the bar. Having taken possession of the brig and rafts, the Lieutenant pushed after the fugitives, (the slaves, chiefly under twelve, shouting with joy at their change of masters), hoping that the strength of the current would retard their progress sufficiently to allow his getting up to them, but did not succeed. The last boat was thrown out on the beach by the surf, and the people jumped out and rushed into the bushes, leaving about a dozen negro children in the boat. Not deeming it prudent to beach the pinnace, the Kroomen were ordered to make fast a rope to the boat and assist by pushing, while those in the pinnace hauled her off.

Before these orders could be executed, a brisk fire of musketry was opened from the bush; and the Lieutenant judging discretion the better part of valour, gave up the attempt, and got the pinnace under sail, when the fire was returned with interest; but the very great motion, and the thickness of the bush prevented any accurate aim being taken. The pinnace then re-crossed the bar, and discovered that the prize was adrift, with the cables unbent, and anchors inboard on deck. She was speedily secured, and the *Albatros* having by that time got close and anchored, the negroes and casks were put on board the prize, but from the rolling motion and confusion, too horrible to be depicted, that service occupied twenty hours, (including a dark night).

On the following day the ship and prize proceeded to Loando, where provisions and water were bought for the use of the latter, and at 5 P.M., on the 5th, she started for Sierra Leone, under the charge of a Lieutenant, with a Mate, Assistant-Surgeon, and seventeen men, boys, and Kroomen, being heartily cheered on passing under the stern of the hitherto most fortunate *Albatros*.

The *Albatros* has captured four prizes since her arrival on the Coast station in June, 1844.

ACCIDENTS AT SEA.—A letter has been forwarded to W. Dobson, Esq., the Secretary at Lloyd's, proposing the use of the following signals:—In cases of men being washed overboard, it generally happens that there is a very heavy sea running, and the boats are unable to observe the position of the man but from the ship, the man being distinctly seen, they can inform the boat's crew how to steer. If to steer steady, show a white flag; if to pull to port, a blue flag; if to pull to starboard, show a red flag. The above useful signals are being introduced into the Royal Navy, and their usefulness proved.—*Times*.

NAUTICAL NOTICES.

NEW DANGER IN THE PACIFIC. — Capt. Sir Everard Home, Bart., in H.M.S. *North Star*, has been rendering important service to seamen in the Pacific Ocean, by the discovery of the positions of two Shoals,—one of which is entirely new, and the other known only by report. We give the annexed extract from the reports of these dangers.

"On leaving Tongataboo for Vavau, on the afternoon of the 6th of August, the course chosen was eastward between the Hapaee's and Eooiagee Islands, and it was shaped so as to pass southward of the reefs extending from the Hapaee Group, which are supposed by Krusentern's chart to reach as far south as 20° 34'.

"The watch was relieved at midnight when no soundings were obtained

with 30 fathoms of line. The usual look-out men were, one man on each gangway, one on each cat-head, one on the fore-yard, one abaft, and an able seaman in the weather-main chains. The sail set was double-reefed top-sails, and fore-top-mast-stay-sail; her way through the water being about two knots and four fathoms per hour.

"At 30 minutes after midnight the fore-sail was set, her way being too little to enable her to tack, in case it should become necessary so to do, and about ten minutes after that, breakers were seen upon the lee-beam; the the helm was instantly put down, when she struck upon a reef; the sea carried her at once over it into deep water, and a passage eastward appearing clear, the fore-sail and fore-top-gallant sail were set, and she passed on not hanging one instant. At the last cast before she struck there was no bottom with thirty fathoms of line, and no more time elapsed than was necessary to haul the line in before she struck, and the next cast was seven fathoms.

"The moon coming from under the clouds right a-head, shewed a passage clear of danger, the water deepening from seven, (which was the shortest cast), quickly to 7½, 8, 8½, 9, 10 to 18 fathoms, and the breakers which were not seen by any person until the ship was in them, were when passed clearly seen.

"J. Everard Home, *Captain.*"

From another paper we extract the following further particulars:—

"At 5 h. 30 m. P.M., Island of Eooaigee bore S.E. ½ E. 10 or 11 miles; ship steered N. 54° E., 17 knots, 4 fathoms, at which time she struck on the reef."

This places the reef in lat. 20° 50′ and long. 174° 40′ W., but as the ship was no doubt set something to the westward by the current, the reef will be west of that longitude.

The position of the second is stated in the following extract of a letter from Sir E. Home, dated New Zealand, Oct. 15, 1844.

"I sailed from Apia on the 1st of September. We had been led to expect to find a Shoal between the Navigators and Wallis Islands. At 6 P.M. the ship passed the spot where it is reported to be, but got no bottom with 100 fathoms of line. But on the following day at noon, we were upon one of great extent; the depth of the water 13 fathoms; nor did it appear to have less. No broken water could be observed. The latitude by observation 12° 53′·8, longitude by chronometer 175° 31′ E."

Hydrographic Office, Admiralty, April 17, 1845.

Lights in the Entrance of the River Gironde, and at Socoa.—The French Government has announced, that on the 5th of March last, two new lights were exhibited in the entrance of the River Gironde, in order to enable vessels to take shelter in the Road of Richard, about 9 miles above Verdon Road.

1. *Tallais Floating Light.*—A Vessel carrying a fixed light is moored in 4 fathoms at low water Spring-tides, with the following magnetic bearings:—

Fixed Light on Point de Grace .	N.b.W. ¾ W.	5047 fathoms.
Talmont Steeple	E. ½ N.	3527 —
Red Harbour Light at Richard .	S. ½ E.	4484 —

She is placed on the middle of the eastern edge of Tallais Bank, which forms the western side of the Channel, the eastern side being formed by the Bank of Talmont.

The Light is 33 feet above the surface of the river, and may therefore be seen 9 or 10 miles from the deck of a pilot boat. And it should be observed that the light is so masked that it cannot lead into the Channel which lies to the westward of the Tallais Bank.

The vessel will be readily distinguished by a skeleton ball at her mast-head, the centre of which is 46 feet above the surface of the river; a bell will be kept ringing during fog.

2.—*Harbour Light of Richard.*—A Red Fixed Light, 56 feet above the level of the highest spring-tides, was at the same time exhibited from the new tower on the west side of the river below the little Port of Richard. The light vessel of Tallais bears from it N ¼ W. 4484 fathoms, and the Steeple of Jau W.S.W. ½ W. 2184 fathoms. It may be seen at the distance of 8 miles.

Socoa Light.—In March also the old light of Socoa, to the westward of St. Jean de Luz Bay, (in latitude 43° 23′ 44″ N. and longitude 1° 41′ 3″ W. of Greenwich) was discontinued and replaced by a new Fixed Light on a small tower recently erected at 48 yards W.b.S. from the former one. The light stands 98 feet above the level of high-water spring-tides, and may be seen at the distance of twelve miles.

East India House, London, April 16, 1845.

Port and Coast of Chittagong. — Notice is hereby given, that in order to facilitate the approach to the port of Chittagong and the neighbouring coast to the southward, a floating Light Vessel has been anchored in the following position, where her light is now exhibited, as well as occasional signals during the night.

Latitude 21° 27′ N., longitude by Capt. Lloyd's chart of the Sandheads, and by observation 91° 45′ E., the centre of the White Cliffs E.b.S. ½ S., distant about 17 miles. The distance from the nearest shore about 14 miles, and from the outer or Western Patch about two miles.

The Port Master states—

"It will be seen from the above description that the light can be made use of for either Channel, viz., to the westward of or between the Patches. The rollers on the Patches are very heavy, so much so, indeed, that at the distance of less than a quarter of a mile, one boat was constantly hidden from the other by their rise.

"The Light Vessel is anchored in 12 fathoms."

James C. Melville,
Secretary.

The Yachting Cruize from Cork to Harwich.

The Yacht Clubs of the North are indeed deserving of all praise; yet the great majority of craft manned for pleasure are to be seen more to the south-ward, and in the usual channel cruizing ground between Cork and Harwich, calling *en route*, at Plymouth, Cowes, Southampton, Harwich, and sometimes at Gravesend, and higher up the Thames. The Thames has a club of its own, of some twenty years standing, in which, however, no vessel of greater tonnage than 25 o.m. can contend for a prize; but the Clubs whose lists we subjoin, have no such restriction. Beginning westward, we must here give the *pas* to the time-honoured Cork Club of which we have printed some account, together with its ancient rules, at p. 32, of our present volume for 1845.

The club-fleet of Cork now consists of thirty-eight sail, of which seventeen belong to Cork itself, where they meet during the summer once a week for the purpose of sailing in company and manœuvering. The fleet

now contains nothing but cutters, except the *Rostellan*, schooner, and the *Kestrel* brigantine, recently a yawl.

List of the Royal Cork Yacht Club.

[Corrected to May 7, 1845.]

Vessels.	Tons.	Owners.
Kestrel	202	Earl of Yarborough.
Rostellan	69	T. G. French,
Adelaide	42	R. H. E. White,
Arab	15	Major Teulon.
Belle	9	N. S Parker,
Black Bess	19	G. M. Corsellis,
Breeze	18	S. Hodder,
Brownsea	33	C. Penrose,
Brunette	43	T. Hungerford,
Caroline	49	C. M. Vandaleur,
Colleenogue	43	W. R. V. Lane,
Columbine	90	J.H.Smith—Barry,
Comet	60	Capt. Newburgh
Coquette	43	H. V. Goold,
Cygnet	19	R. Lander,
Cynthia	39	R. Frankland,
Daphne	27	C. Newman,
Dolphin	69	Rev. D. Mahoney.
Druid	44	W. Perry,
Edith	70	J. C. Ewart,
Ellen	16	R. U. P. Fitzgerald,
Emerald	29	H. D'Arcey,
Fawn	35	C. Putland,
Gannett	86	Hon. R. White.
Giaour	18	Rev. Dr. Austen.
Guerilla	45	H. S. Burton,
Kathleen	8	Lord Kinsale.
Mask	24	S. T. W. French,
Oberon	54	J. C. Kearney,
Petrel (a)	19	A. Hutchinson,
Petrel (b)	20	W. Beamish,
Psyche	27	W. B. Leslie,
Sylph	20	R. P. Williams,
Therese	120	Earl of Desart
Thetis	43	The. O'Grady,
Tickler	15	E. Smyth,
Union	45	B. Barter,
Victoria	57	D. Connor,

The ensigns worn by the eight English and Scotch Yacht Clubs were described in our last number, p. 274.

The colours of the clubs of Ireland it is not so easy to mention; since the Shannon Club seems almost if not quite defunct; and the clubs of Dublin and Kingstown are likely to make some early application to the Admiralty on the subject. Belfast has no club or colours since it separated from the Clydesmen, but the Royal Cork Yacht Club, by an Admiralty Warrant dated Nov. 2, 1831, still wear the following distinguishing flags:—

Burgee	Red, with Yellow Harp and Crown.
Ensign	Red,—the Union, with the Harp and Crown on a green field in the centre.
Vice-Admiral ...	Red Cornet, with Yellow Harp and Crown.
Admiral	The Union, with the Irish Harp and Crown on a green field in the centre.

Cork Regatta is fixed for July 22nd and 23rd, 1845.

Royal Western Yacht Club, Plymouth.

This distinguished Club was referred to in our Volume for 1844, p. 572, and the sports of its last Annual Regatta described in the same Volume, p. 632. The Plymouth Regatta for 1845, is, according to general rule, fixed for August 26th, Prince Albert's birth-day; but as we must refer to this subject in our July or August number, we shall here merely subjoin a list of the Club itself, (61 sail), corrected to the middle of May, 1845. The Plymouth Yachts wear the *Blue Ensign* of H. M. fleet, without the addition of any device, while those of the Cowes Squadron wear the *White Ensign*. Both Clubs have a code of signals known privately to themselves only, and to the Royal Navy.

CUTTERS.

Vessels.	Tons.	Owners.
Midge	14	J. W. Peard
Nettle	57	Capt. Douglas
Olivia	25	E. J. Armstrong
Osprey (a)	52	G. S. Curtis
Osprey (b)	59	J. Petre
Paul Pry	23	Hon. P. Plunket
Sapphire	70	C. W. Rothery
Seanymph	10	C. Wheeler
Sibyl	21	J. R. Carnac
Stag	11	O. Warrington
St. Margaret	30	S. R. Delme
Sultana	49	R. Wake
Sylph	17	W. Bush
Tartar	30	W. H. Dawes
Termagant	15	R. Wright
Transit	23	— — Knight
Triton	17	J. C. Goodridge
Turk	44	T. Hare
Will o'the Wisp	44	Capt. H. Williams
Wyvern	24	C. B. J. Roper
Young Queen	13	Capt. Whitbread
Zephyr	56	A. E. Bowen

SCHOONERS AND BRIGANTINES.

Tons.	Owners.
s. 101	Sir C. H. Ibbotson
s. 59	R. W. Handy
s. 143	T. Halifax, jun.
s. 103	C. Phillips
s. 143	W. Peareth

Vessels.	Tons.	Owners.
Griffin	s. 17	G. Freeth
Kestrel	b. 202	Earl of Yarborough
Menai	s. 176	W. Faber
Peri	s. 59	Capt. C. Bulkeley
Titania	s. 29	G. Leith

LUGGERS.

Tons.	Owners.
29	J. C. M. Poore

Vessels.	Tons.	Owners.
Nora	26	C. E. Blaydes

YAWLS, or "DANDIES."

Tons.	Owners.
10	W. Stovin
13	H. G. Hopkins
163	E. White

Vessels.	Tons.	Owners.
Nautilus	103	J. Wardell
Pauline Garcia	10	Lord Graves

This list of the R. W. Y. Club, Plymouth, is corrected to the middle of May. The next PLYMOUTH Regatta will, as we have said above, be held on Prince Albert's birth-day, Tuesday, August 26. The sailing-matches, which came off in the SOUND in the same date in 1844, are reported in the last volume of the *Nautical*, p. 632.

ROYAL SOUTHERN YACHT CLUB.—Some account of this Club appears in the present volume at p. 102.

ROYAL HARWICH YACHT CLUB.

This squadron has just been joined by the Marquis of Conyngham in the *Harrow*, cutter, 183 tons; and by the Marquis of Anglesea, in the cutter, 130 tons. The resident Committee of the Club have indivi- bought some small Yachts, so that the "*Blue Ensign of H. M. Fleet Lion Rampant*," will ever be flying in the Port of Harwich, whether Yachts of the Club be present or absent.

contains the *Transit*, 23 tons; *Exquisite*, 15; *Phantom*, 11, &c., we shall notice in a future number.

Wrecks of British Shipping.

Continued from p. 271.—cs. crew saved; cd. crew drowned.

VESSELS' NAMES.	BELONG TO.	MASTERS.	FROM	TO	WRECKED.	WHEN.
Alex. Robertson 118	———	———	———	———	Crooked I.	Feb.
Ann Mondell	———	Roberts	Ichaboe	Pernambuco	———	Feb. 28,
Bengal 120	Whitby	———	London	St. John NB	Seal I.	Mar. 30, cs
Borealis	Glasgow	Miller	Glasgow	Havana	G. Bird S.R.	April 1, cs
California	Greenock	———	———	———	Cuba	cs
Cleopatra	———	Harrison	Sunderland	Richbucto	Ventry	April 27
Clio	———	Kelly	London	Savannah	Hunting I.	April 6,
Duke of Sussex 125	steamer	———	London	Boulogne	off Boulogne	May 2, cs
Edward	Scarboro	Redhead	Hartlepool	London	Scroby S.	May 12,
England's Queen	———	———	———	———	Whitley	April 9,
Enterpe	Greenock	———	St. Domingo	———	W. Hoyle B.	April 14,
Facility	Salcombe	May	Shields	Salcombe	Goodwin S.	Apr. 13, cs
Hibernia 130	Sackville	stern	frame pic	ked up off	Brier I.	April 1,
Inglis	———	Isaacson	Bombay	China	off Anjeer	Jan. 10
Isabella	———	Palmer	Ichaboe	not heard of	since August	last
Isabella	———	Leask	St. John NB	Aberdeen	abandoned	March 9,
Lady Raffles	———	———	S. Leone	Liverpool	H. Head	Apr. 29, cs
Lord of the Isles 135	———	M'Kinney	Wilmington	Liverpool	———	———
Lord Keane	———	condem	ned at	Ichaboe	prior to	Feb. 18,
Mary Ann	———	Davidson	London	Perth	Tetneyhav'n	April
Mary & Elizabeth	———	———	———	———	Portland C.	April
Palanquin	———	Mura	Liverpool	Bombay	Nelson 1.	Dec. 21, cs
Phillips 140	———	Scott	Liverpool	Valparaiso	Hartwell R.	Mar. 23, cs
Rose	Yarmouth	Miller	found aban	doned in	45° N 33′ W	Feb. 28,
Sally Ann	Whaler	———	Portland	Bay	P. Adelaide	Nov. 17,
Susan	Glasgow	Lamont	Glasgow	Charente	I. Re.	May 9, cs
Tory	———	Johnson	Singapore	Shanghai	Yang-tzekng	February
Venus 145	———	Browne	singapore	Borneo	Bintang	Jan. 20,
Zenobia	———	Lucas	Hartlepool	Plymouth	run foul of	Apr. 6, 1d

Singapore—March 6: *Java Courants*, lately received, supply accounts of the loss of the Inglis, near Anjeer. The Inglis, Isaacson, 1,600 tons burthen sailed from Bombay on the 14th of December, for China, with a cargo consisting of 7,000 bales of cotton, &c., and on the 10th of January last, during a heavy north-west storm and thick fog, got on shore. Every exertion was made to get her off by throwing cargo overboard, and carrying out the anchor for the purpose of warping her out, but the chains of both anchors broke from the strain upon them, and she only became more firmly fixed. The masts were cut away, but without effect, and the vessel remained on the sand in 11 feet of water, she drawing 23 feet in the after part.

The Dutch government steamer Hecla was dispatched from Batavia immediately on receipt of the news of the Inglis's condition, and arrived at Anjeer on the 14th, after encountering very bad weather. The Hecla rendered every assistance, and the Dutch authorities at Anjeer were also equally active. During five nights and four days the crew of the Inglis, assisted by 200 natives of Java, with about thirty prahus, brought by the assistant resident of Anjeer, worked, without intermission, in the midst of a constant storm, in trying to save the ship and cargo, but owing to the small size of the only boats obtainable at Anjeer, and the heavy surf; which rendered it difficult to approach, so much was not accomplished as might otherwise have been done from the activity and goodwill with which all exerted themselves. About 120 bales of cotton, the guns, the greater part of the sails, and some articles found near at hand, were saved. The weather having moderated there were some expectations entertained that by cutting into the vessel on the side next the shore, a large part of the cargo might be got out, the wreck not being more than fifty or sixty fathoms from the shore, but we have not yet learned whether these expectations were realized.

The vessel will in all probability go to pieces, as she was much injured by the gale and the heavy surf which broke over her. On the 17th the masts

and crew, consisting of 160 hands, left the wreck and went to Anjeer, where they were taken care of by the assistant resident. On the 19th Mr. Isaacson and 23 of the crew proceeded to Batavia, in the Dutch vessel Maximilian Theodore, where they arrived on the 26th of January. Captain Isaacson has since died, no doubt from the fatigue and anxiety undergone by him. We also learn that a vessel has been chartered to bring the crew to Singapore.

Prussian Ships.

We have received the following Circular of the 16th of August, from Mr, Hebeler, His Prussian Majesty's Consul-General in London.

In consequence of various Navigation Treaties recently concluded between the Prussian Government and various foreign States, as also in reference to the stipulations of the convention entered into by Prussia, Great Britain, Austria and Russia for the suppression of the Slave trade, dated 20th of December 1841, a necessity has shewn itself to watch with the greatest care, not only that all Prussian ships are provided with the necessary documents to prove upon the High Seas or in foreign ports their nationality and right of using the Prussian flag, but also that the improper use of the Prussian flag by vessels, not entitled to carry the same, may be prevented. To attain the latter object the co-operation of the Royal Consuls General, Consuls and Vice Consuls is most important, and the undersigned Department feels itself called upon to lay down the following Regulations, to be observed in this respect.

None can be considered Prussian ships, and entitled to use the Prussian flag, but those, which belong to Prussian subjects, and if such ships are held in common ownership by many persons, all must be Prussian subjects. Other conditions, besides the foregoing, are not required on the part of the Prussian Government, in order to acknowledge the nationality of a Prussian Ship; to speak more particular, it is not absolutely requisite, that the national character of the crew or the build of the vessel should be Prussian; consequently vessels, which may have been built in countries, not subject to Prussia, and which may have belonged to foreign owners, and have become subsequently the sole property of Prussian subjects, may obtain the rights of national Prussian subjects, as soon as they are brought into a Prussian Port, and, upon being there admeasured, have obtained the Prussian ship-papers. On the other hand, no vessel, which wholly or in part belongs to a person, not a Prussian subject, is entitled to make use of the Prussian flag, not even if the same has been built within the Prussian States.

The documents, with which Prussian vessels are to be provided in testimony of their national character have varied hitherto in number, form and content, but a regulation has been adopted, which will in these respects introduce in future a desirable simplicity and uniformity. According to this, Prussian ships are bound to carry in future only the following papers, viz.

1. A Certificate of build (or construction) issued by the proper Prussian Authority, which to be perfect must contain
   a, the proof, how and where the ship has been built.
   b, the name of the Ship, and of the Owner or Owners.
   c, the Deed, under which the property has been acquired.
   d, the Certificate, that the Ship belongs to Prussian subjects.
2. A Certificate of Admeasurement, issued by the proper Prussian Authorities to prove the burthen of the ship.
3. A Muster-roll, shewing the number, the names and the national character of the Crew belonging to the ship.

Of these several Documents, the Certificate of the build is the most im-

portant, as the same is to prove that the vessel is wholly owned by Prussian subjects. It is therefore also requisite, that the same always shews the names of her present Owners and consequently every alteration of an Owner (or Owners) must be endorsed thereon. And this will be particularly necessary in cases, where a Prussian vessel, or a part thereof, is sold to a person, not a subject of Prussia, whereby her national character becomes forfeited and that such vessel may not by means of the certificate of her build improperly continue to sail under the Prussian flag, and obtain in foreign ports the advantages which Prussian ships may enjoy there.

In respect of this, the several Royal Consular Functionaries (as also all such Royal Courts within the Kingdom, as are competent to act in such matters) are hereby enjoined, whenever it comes to their knowledge, that a Prussian vessel or a part thereof has been sold by the Owner, that they shall make an official remark, naming the new Owner, upon the vessels Certificate of build, and in case of the vessel being sold to a person, who is not a subject of Prussia, that they do add to the aforesaid remark, that in consequence of the said sale, the ship in question has ceased to form a part of the Prussian Commercial Marine and that she is no longer entitled to sail under the Prussian flag.

The Department for Foreign Affairs, (Signed)
Berlin, 16th April, 1845. EICHMANN.

THE POLAR EXPEDITION.—Once more our gallant tars are on their way to fields of ice; may we hope to realize all the good wishes for the successful result of their voyage, that they have taken with them. The ships *Erebus* and *Terror* left Woolwich on the 12th, and Greenhithe on the 19th of May to pursue their way along the Eastern Coast, and thence by the Orkneys to Baffin's Bay, Barrow's Strait, and then, as they best may speed to Bhering Strait. We shall not fail to watch them as long as we can and hope to have more to say of them in our next.

TRAIL'S STORM SAILS.—A Pamphlet has been left with us, describing a method of strengthening sails by means of diagonal bands crossing each other at equal distances. The proposal is decidedly good, but we do not approve of the band being formed of a strip of canvas, which when fastened to the sail must have each of its edges turned in, whereby it becomes doubled, and forms a clumsy ridge on the surface of the sail. We recommend the patentees to have a species of canvas tape made on purpose, by which this doubling will be avoided, and which can be made any size and strength. This, in our opinion, is all the plan requires to render it perfect when we have no doubt, from its great economy, it will be generally adopted.

CHATTEN'S PATENT DEAD EYE.—Of all the primitive applications we find still in use at sea, the Dead Eye, or "Dead Men's Eyes," is the most so. We have met with an attempt at improving it before, but certainly not so complete as that of Mr. Chatten's. In another number we may describe the machine itself, which we have now only space to recommend to the notice of nautical men.

DISCOVERY OF TREASURE IN THE CHINA SEA.—(*Extract of a Letter from Madras, dated Feb. 22nd.*)—"A Spanish schooner fishing, &c. among the shoals in the China Sea, discovered a chain cable over the coral reef on the East London Shoal, and on a close examination, a sextant and a chronometer, and close to these articles, what first appeared lead, but turned out to be Sycee silver; and 150,000 dollars' worth of the precious metal was found and put on board the schooner, when the Skipper most honourably

proceeded to Macoa or Canton, and there delivered the whole of the treasure to the Insurance-office, who gave the noble-minded Spaniard about 50,000 rupees. It was conjectured in China that the bullion was part of the cargo of the Christina, as she sailed two years ago, and has never been heard of since. The names and numbers on the sextant and chronometer may afford a clue to the identity of the ship and Captain.—*Times.*

THE EXPERIMENTAL LINE-OF-BATTLE SHIP SQUADRON.—We have, on former occasions, frequently alluded to the enormous quantity of canvas spread by the Surveyor's ships, compared with that of their competitors. The difference will be shown by the following statement; in which is given the number of guns, tonnage, and square feet of canvas, of each of the different classes of ships ordered to take part in the forthcoming trials :—

	Guns.	*Tonnage.*	*Square Feet.*
Trafalgar	120	2,721	27,100
St. Vincent	120	2,612	27,100
Queen	110	3,099	29,500
Rodney	92	2,625	27,100
Albion	90	3,082	29,500
Canopus	84	2,257	27,100
Vanguard	80	2,609	27,100
Superb	80	2,590	27,100

It will be seen, therefore, that the *Superb* and *Vanguard*, the Surveyor's 80-gun two-deckers spread the same surface of canvas as the *Rodney*, 92, and the *Canopus*, 84; and that the *Albion*, 90, the Surveyor's two-decker, spreads as much as his three-decker the *Queen*, 110, which ship outspreads the *Trafalgar* and *St. Vincent*, 120-gun ships, three-deckers, by 2,400 square feet. The sails here calculated are what in naval construction are called the principal working sails, which include courses, top-sails, top-gallant-sails, jib, fore-top-mast-stay-sail, and spanker.—*Morning Herald.*

THE "FAIRY."—The performances of the screw, and its decided superiority over the paddle-wheels, will be seen by the comparative speed of Waterman No. 12, which is considered one of the fastest boats on the river, and the Fairy. No. 12 Waterman was tried on July 10, 1844, when she performed the measured mile at Long-reach.—

With tide.	*Knots per hr.*	*Against tide.*	*Knots per hr.*
4 min. 6 sec.	14.634	5 min. 41 sec.	10.557
4 2	14.876	5 38	10.663
4 4	14.745	5 37	10.662
4 11	14.342		

Averaging 12.689 knots, or 14.617 miles per hour.

The performances of the Fairy, on Saturday last, were as follow :—

With tide.	*Knots.*	*Against tide.*	*Knots.*
3 min. 49 sec.	15.721	5 min. 41 sec.	10.557
3 45	16.000	5 34	10.778
3 47	15.859	5 32	10.843
		5 36	10.714

Thus giving an average speed of 13.425 knots, which is equal to fifteen and one-third miles an hour; consequently the Fairy was more than seven-tenths of a mile per hour faster than the Waterman 12. The Fairy, after the above trial at the measured mile, proceeded as far as Herne Bay, in the course of which trip she maintained those qualities as a sea-boat which she was found to possess in the river. In a strong wind and with the same speed, she had none of the rolling motion which cavillers on the screw principle contend that every vessel so propelled must invariably have.

Light of Cape Agulhas.—We remember and our readers will no doubt also remember some great meetings and some glowing speeches in some of our former volumes, on the subject of the Cape Light, but they have yet failed to illuminate the Cape, and the only solid information we can collect besides a list of contributions towards it in our volume for 1843, is contained in the following more business-like commmunication which we find in a recent Cape paper. Governor, says to his local Parliament that in the expenses of the colony appears £5,000 in aid, towards the erection of a light-house at Cape Agulhas; and I should hope, added to contributions from other quarters, that this last sum may be the means of causing this important building to be erected. The estimated expense for this work is £12,800 and a similar sum would be required for erecting a Lighthouse on Cape Receif, which if not of equal importance with the Light on Cape Agulhas, is of very great importance, and will, I trust, receive from your revenue of 1845 a similar contribution.

The New Slave Trade treaty.—*(From a Correspondent.)*—All but the smallest items being not only fixed upon, but reduced to necessary form, the New Slave Treaty will be signed before Friday next, when the Duke de Broglie will probably leave England. He is expected to reach Paris by Monday or Tuesday; Prince Charles, his son, and Secretary to the mission, left on Friday.

The preamble of the New treaty sets forth that the Queen of England and King of France (the parties most deeply bound to the execution of this duty from their superior Naval resources) deeming that the treaties of 1831 and 1833 have produced all the effect they were capable of, are desirous of forming another compact suited to the present emergency, in order more effectually to repress the Slave trade.

They have accordingly drawn up the present treaty, to endure for ten years, unless, at a period to be appointed (which will probably be towards the fifth year,) their mutual efforts should have proved insufficient and unsatisfactory. It is therefore arranged that France shall keep on the western coast of Africa a fleet consisting half of steamers, and half of sailing ships, the number amounting to not less than 26; and that the Naval force employed by England will be of the same character, calibre, and amount, exercising simultaneously due vigilance on the flag of their respective nations.

The treaty has been brought to this rapid termination by the confidence placed in the Duke de Broglie. It is satisfactory to state that the representatives of foreign powers who signed the last treaty, not ratified by France, have shown the greatest goodwill on the present occasion, being animated by feelings of amity to both the contracting parties, and desirous under every circumstance to see energetic and effective measures employed for the repression of the slave trade. The feeling which animates the British Government is that which it has displayed already in the compact with America, namely, a desire to prove its sincere wish to suppress an outrage to human nature apart from any views as regards the empires of the seas, a confirmation of the spirit which led to the sacrifice of £20,000,000, to liberate the slaves in the British Colonies.—*Times, May*, 26.

The Rattler and the Alecto.—In the trials which had been instituted by the Admiralty between these vessels, to test the qualities of the screw-propeller *Rattler*, and the paddle-wheel *Alecto*, the superiority of the *Rattler* has been fully shown. In one of the trials which took place on the 30th March, during a perfect calm, from the Little Nore to Yarmouth Roads, eighty miles, the *Rattler* beat the *Alecto* twenty-three minutes and a half, although the *Rattler*, in consequence of a short supply of steam, was

compelled to work the second grade of expansion throughout the day, and the engines only twenty-three and a half to twenty-four strokes per minute. On arriving at Yarmouth Roads they started again, both vessels having all sails set to a moderate breeze. They continued running until off Cromer Light, when the *Rattler* in thirty-four miles beat the *Alecto* by thirteen minutes.

From the bad appearance of the weather it was deemed proper to anchor for the night, during which it blew a complete gale from the N.N.W., and continued throughout the day, affording the very opportunity they were sent out to seek for, trying the *Rattler's* powers in a head sea. In getting under way, the vessel pitched heavily, snapped her cable, and lost her anchor. This race was one of about sixty miles, and the *Rattler* passed the Spurn Light forty minutes before her competitor. On one occasion the *Rattler* lost steam, which allowed the *Alecto* to get alongside of her. This was at ten o'clock a.m., and it was from that time to her anchoring that the forty minutes were gained; although prior to that, when the sea was roughest, the *Rattler* gained more than half a mile on the *Alecto* in the first hour, the latter having had the start of the former. The sixty miles was accomplished in seven hours and a half, tide principally against them. The very lowest pressure exhibited "when the screw was out of the water," (as the opponents of the principle term it) was 34 lbs. ranging up to 60 lbs., on Salter's balance.

Subsequent trials took place with still greater advantages to the powers of the screw; but the most conclusive results as to its superiority were proved when the vessels being fastened to each other, with their heads in opposite directions, the *Rattler* towed the *Alecto*, in spite of all her attempts to run away astern, at the rate of two miles and a half an hour.—*Morning Herald.*

Monthly Record of Naval Movements.

Acteon, 26, Capt. Mansel, March 13, left Tenerife for Rio, thence for Cape; *Agincourt*, 72, Capt. Bruce, Feb. 4, at Hong Kong, to proceed to Singapore; *Albion*, 90, Capt. Lockyer, May 16, arr. at Portsmouth from Devonport; *Acorn*, 16, Com. Bingham, March 16, arr. at Rio, 19th, sailed for the River Plate.

From letters dated Ascension, March 17, 1845, we learn that Her Majesty's brig *Albatross*, on the morning of the 1st of this month descried a vessel off the river Coanza, very close to the land, but from having very light winds did not reach her until the prize-crew had managed to escape in their boats with their valuables. On boarding her, she proved to be the fine brig *Albany*, 300 tons, with 750 slaves on board, 170 of whom were females, 100 of them about 18 years of age, and exceeding well-looking, the rest children under 12 years of age. Three of them died on the morning she was taken. In one of the letters the writer says,—"Of all the horrible sights I ever witnessed, this was the worst; in fact, too horrible and disgusting to relate. They were all quite naked. Some of them had broken open a cask of palm oil, and covered themselves therewith, and then licked it off each other. They also got hold of some raw pieces of pork, which they ate like pigs. The stench was horrible indeed." Her Majesty's brig *Hervine* was dismasted, early in the year, off the Gallinas; since which (in March) she captured a fine brig of 300 tons off Loando.

By accounts from the West Coast of Africa, dated 2nd March, we learn that the *Albert*, steam vessel, Lieut. Com. A. R. Dunlap, had been very suc-

cessful off Seabar, having captured three prizes in eight days, viz., the Sua Majestad, with 422 slaves on board; the Triumpho, brigantine; and the Venus, schooner, all Spaniards; the two latter fully equipped. The *Albert* was to be at Sierra Leone in a fortnight. We are informed that these slave vessels are mostly built in America, and are immediately bought and equipped by Spaniards.

Capt. J. Washington (1842,) of *Blazer*, in consequence of his duties as one of the Tidal Harbour Commissioners requiring his presence in London, has leave of absence; and Capt. O. Stanley (1844,) appointed *pro tem.* Acting Capt. of *Blazer*, to continue the survey of the North Sea.

Caledonia, 120, Capt. Milne, April 28, paid off,—the flag of Admiral Milne was struck at sun-set; *Canopus*, 84, Capt. F. Moresby, Apr. 29, hoisted the flag of Admiral Sir J. West, successor to Sir David Milne; *Collingwood*, 80, Capt. Smart, Jan. 12, at Valparaiso, about to sail for Tahiti; *Comus*, 16, Com. Thompson, March 24, left Madeira for Rio; *Cambrian*, 36, Capt. Chads, Feb. 21, at Singapore, expected home in June; *Castor*, 36, Capt. Graham, Feb. 4, at Hong Kong; *Cruizer*, 16, left Simon's Bay, March 9.

Driver, st. ves., Com. Hayes, March 1, left Calcutta for Borneo, conveying to Sarawak, in the first instance, Capt. D. Bethune, R.N. C.B. and Mr. Wise, charged with a special mission from the English Government; *Dolphin*, 3, left Rio for River Plate, March 7.

Electra, 18, Com. Darnley, March 12, left Port Royal for Texas; *Eurydice*, Capt. Elliott, March 29, left Vera Cruz for Texas; *Eagle*, 50, Capt. Martin, flag of Rear Admiral Inglefield, left Madeira, April 10, for Rio; *Eclair*, st. v., March 1, at Sierra Leone.

Hyacinth, Capt. Scott, April 12, at Port Royal; *Helena*, 16, Com. C. Ricketts, May 13, sailed from the Cape; *Hecate*, st. v., Com. Bower, May 15, arr. at Portsmouth, having landed the India Mail at Southampton.

The *Hydra*, steam sloop, Commander Young, has captured the Hurican, a slaver, with 70 slaves on board. Eight days after the capture of the Hurican, the *Hydra* made prize of another famous, or rather infamous slaver, and which had given our fleetest cruisers the slip on several occasions. This was the Pepita. When Lieut. Kooystra, acting First Lieut. of the *Hydra*, boarded her, he discovered every preparation for a most bloody resistance, a long 18-pounder being pointed over her quarter, loaded with grape and round shot, a cask full of cartridges near, several swivels loaded with 1-pound ball, four chests of arms, the muskets and pistols all double loaded, some with ball and others with slugs, the deck strewed with round and grape shot, and upwards of 200 rounds in her magazine. She had upwards of 300 slaves on board. This was the 16th capture made upon the coast of Africa by Com. Jones's squadron this year.

Illustrious, 74, Vice Admiral Sir Charles Adam, April 12, at Bermuda; *Iris*, 26, Capt. Rowley, Feb. 4, at Hong Kong, to proceed Northward; *Inconstant*, 36, Capt. Freemantle, April 24, arr. at Gibraltar, from Bermuda.

Medea, Com. T. Warden, May 2, arr. at Portsmouth from the Mediterranean, 5th, sailed for Woolwich, 7th, arrived; *Mutine*, 12, arr. at the Cape of Good Hope, March 16.

North Star, 26, Capt. Sir J. E. Home, arr. at Port Arthur (Van Diemen's Land) Nov. 23, from Auckland (New Zealand), having made the passage in eighteen days; she was discharging stores and dismantling prior to being hove down to repair damages sustained by striking against a coral reef off the Feejee Islands, by which she lost a portion of her fore foot. The repairs would take some months before she would be ready for sea again, when she would return to England to be paid off. See p. 322.

Osprey, 12, arr. at Simon's Bay, March 9.

Pickle, 2, left Honduras, March 28, for Hayti; *Pique*, 36, Capt. Hon. M. Stopford, expected home from the West Indies, April 8, at Barbados.

Racehorse, 18, Com. G. Hay, April 25, arr. at Devonport, May 8, sailed

for Australia and the East Indies; *Rose*, 18, Com. Pelley, April 8, at Barbados; *Racer*, Com. Peel, Feb. 10, at Buenos Ayres; *Ranger*, 16, left Bonavista for Sierra Leone, with Mr. Gabriel, H. M. Arbitrator on board; *Royalist*, Feb 27, arr. at Trincomalee from Singapore.

Superb, 80, Capt. A. L. Corry, April 27, arr. at Portsmouth, from Plymouth; *Scylla*, 16, Com. Sharpe, March 20, left Port Royal for Musquito Shore; *Spartan*, Capt. Elliott, April 8, at Port Royal; *Sappho*, 16, Com. Hope, March 1, at the Cape, March 9 left Simon's Bay; *Satellite*, Capt. Rowley, Feb. 27, at Buenos Ayres; *Styx*, Com. Hornby, May 15, arr. at Devonport.

Thunderbolt, st. v., Com. Broke, Feb. 9, at Ichaboe; *Thunder*, Com. Barnett, April 12, at Nassau.

Vestal, 26, Capt. Talbot, Feb. 25, arr, at Trincomalee; *Vanguard*, 80, Capt. Willes, May 12, arr. at Portsmouth.

Winchester, May 13, at the Cape.

MEDITERRANEAN.—The *Fantome*, 16, Com. Sir F. W. Nicholson, Bart., arr. at Malta, from Naples, on 20th ult., whither she had conveyed a Secretary for the Embassy. She saluted the flag of the Commander-in-Chief. *Snake*, 16, Com. the Hon. W. Devereux, left Malta on the night of the 23rd ult. for Candia and Beyrout. *Aigle*, Capt. Lord Clarence Paget, was expected at Malta on the 25th ult., from Syrmna. *Devastation*, steam-sloop, Com. Kitchen, was hourly expected at Malta, on the 25th ult., from Barcelona, and *Virago*, steam-sloop, from Constantinople, the latter having been relieved by the *Hecla*, Com. Duffill.

NEW CHARTS.

Published by the Admiralty, and Sold by R. B. Bate, 21, Poult

PORTLAND AND WEYMOUTH ROADS.—*Surveyed by Com. W. L. Sheringham, R.N.* 1844. Price 1s.

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TRAITS OF SINGAPORE, DURIAN, AND RHIO. Price 2s.—*The important Survey of* RHIO STRAIT, *by Lieut. Dittleof Tjassens, of the Royal Dutch Navy, has been added to this.*

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VER TAMAR IN VAN DIEMEN'S LAND. — *By Mr. John Welsh. The Entrance corrected by Commander Stokes' Surveys.* 1840. 1s. 6d.

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ES, AUSTRALIA; GULF OF CARPENTARIA.—*Surveyed by Com kes.* 1841. Price 1s. 6d.

IVER, AUSTRALIA, N.W. COAST.—*Surveyed by Com. J. L. Stokes. Extends from the Entrance to Emu Plains.* Price 2s.

OF CHILCA, SOUTH AMERICA.—*Surveyed by Capt. Sir Edward N.* 1838. Price 6d.

May, the brig Isla. Capt. Robinson, belonging to Aberdeen, ness for Davis Straits in search of black lead, and other ding in that icy region. She is furnished with a mineralogist. so prepared for whaling, having two boats and a crew of twenty e.

Promotions and Appointments.

(From the Naval and Military Gazette.)

Downing Street, May 8.—The Queen has been pleased to appoint Adm. Sir R. W. Otway, Bart., and Vice Adml. Sir E. W. C. R. Owen, Knights Commanders of the Bath, to be Knights Grand Cross, and Rear Adml. Sir E. Chetham, Knt., Companion of the Order, to be a Knight Commander thereof.

Promotions.

Commanders—F. Kemble, G. H. Romney, E. Collier.

Retired Commanders of 1830—W. Lambert, S. Mottley, M. Raven, I. Harris, and J. Jackson.

Lieutenant—G. C. Kerr.

Surgeons—J. Paul, A. J. Little, J. Davidson.

Assistant Surgeons—J. Gray (c), J. Gordon (b).

Paymasters and Pursers—T. Gould, W. Thomas.

Appointments.

Captains—W. J. Johnstone (1823) to *Agincourt*—O. Stanley (1844) to *Blazer*.

Lieutenants—E. J. Lloyd (1842) to *Formidable*—W. H. Bridge (1841) and T. Gresham (1843) to *Vernon*—R. Lloyd (1810) to be agent for Mails—M. Bourchier (1814) to *Siren*—W. Moorehouse (1842) to *Vanguard*—W. A. Pearse to *Penelope*—R. A. Wake (1837) and A. Cumming to *Queen*—C. Austen (1844) to *Vindictive*—H. G. Veitch to *Shearwater* steam surveying vessel—H. E. S. Winthrop (1839) and E. M. Hogge to *Rodney*—Nourse to *Rattler*—G. Fowler (1841) to be Flag Lieutenant to Sir J. West, Port Admiral at Devonport—E. Griffiths (1815) to be agent for transports—C R. Bamber to *Vesuvius*—R. B. Miller (1837) to *Melampusi*.

Masters—J. Underwood to *Queen*—G. B. Hoffmeister to *Victory*—J. Wood to *Ocean*—J. G. H. Thain to *Victoria and Albert* for service to *Fairy* tender—H. Davy to *Caledonia*.

Mates—T. L. Gaussen to *Rodney*—C. M, Luckcraft and G. E. Wright to *Queen*—M. H. Perceval to *Excellent*—G. T. S. Winthrop to *Jackall*—H. Vernon to *Rodney*—E. Couch to *Erebus*—

Second Masters—J. Thomas to *Queen*—J. Matthews to *Melampus*—R. H. Roberts to *Victoria and Albert*.

Midshipman—G. Parker to *Hibernia*

Naval Cadets—J. W. East *Hibernia*—J. East to *Vesuvius*—C. Fitzgerald to *Blazer*.

Surgeons—J, Elliot to charge of the convict ship *Marion*.

Assistant Surgeons—E. J. Irving to *Tortoise*—J. Risk to Greenwich Hospital—J. Acton to *Racehorse*—J. Gray (e) to *Pandora*—W. Nooth and T. Sole to *Victory* for service of Haslar Hospital—J. Haire to *Victoria and Albert*.

Chaplains—W. Pilcher to *Vernon*—G. Cooper to *Queen*.

Naval Instructors—W. Whitmarsh to *Vanguard*—T. Raimback to *Canopus*

Paymaster and Purser—J. Smith to be Secretary to Adml. Sir J. West.

Clerks—J. Simpson to *Vernon*—T. Ramage to *Columbia*.

Coast Guard.

Appointments.—Com. W. Prowse, to be Inspecting Commander, vice Com. J. M, Bate, R.N. D.D, appointed to the Harwich district, vice Com. W. McIlwaine to Dartmouth.—Lieut- J. O. Freeland, R.N. to be Chief Officer at Kingston.

Removals.—Lieut. E. Slade, R.N. to Cairnryon Lieut. J. M. Paynter, R.N. to Dartmouth vice Lieut. H. J. Jones, to H.M.S. San Josef, Lieut. J H. Jefferies to Blyth Haven, vice Lieut. H. Collins, M. J. Hungerford to Larne.

Births, Marriages and Deaths.

Marriages.

At St. Marks, Kennington, April 17th Lieut Henry Laird Cox, of H.M.S. Fearless, to Elizabeth, eldest daughter of Lieut. J. W. Crispo of Montreal.

May 18th, at Shelley, Essex, Lieut. Col. Gibsone, R.M.A., to Margaret, third daughter of the late W. Crew, Esq.

May 21st, at Compton Bishop, G. Littlehales, R.N., son of Vice-Adm. Littlehales, to Mary, daughter of the late Captain Cleather.

Lately at Dover, A. B. Cutfield, Esq.

Surgeon R.N., to Elizabeth, daughter of M. Kennett, Esq.

April 25th, at Cheltenham, Lieut. Jeffery, R.N., to MaryAnne, daughter of the late J. Stephenson, Esq.

May 10th, at Cartnell, F. C. Dickson, Esq., to Sophia, daughter of Capt. W. B. Bigland, R.N.

April 30th, at Mereworth, Capt. W. H. Hall, R.N., to the Hon. Hilare Caroline Byng, daughter of the late Vice-Admiral Viscount Torrington.

May 7th, at Southampton, Mr. Pike, H.M. Customs, to Madelina, youngest daughter of the late Capt. Miller, R.N.

Deaths.

May 5th, at sea, Adml. Sir D. Milne, G.C.B., &c.

At Greenwich, Mrs. Huggins, relict of Mr. R. Huggins, Purser R.N.

At Milton-on-Thames, Elizabeth wife of Lieut. L. Dennys, R.N.

May 4th, near Tenby, Lieut. J. K. Tudor, R.N.

Mar. 26th, at sea, Lieut. I. Maling, R.N.

At Singapore, Jan. 29th, Com. Scott, E.I.S.

METEOROLOGICAL REGISTER.

Kept at Croom's Hill, Greenwich, by Mr. W. Rogerson, of the Royal Observatory.

From the 21st April, to the 20th May, 1845.

Month Day.	Week Day.	Barometer.		Fahrenheit Thermometer, In the Shade.				Wind				Weather.	
								Quarter.		Strength			
		9 A.M.	3P.M.	9AM	3PM.	Min	Max	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.
		In Dec.	In Dec.	o	o	o	o						
21	M.	30·13	30·06	51	63	36	64	NE	E	4	3	bv	bv
22	Tu.	30·00	29·96	44	62	39	63	NE	NE	3	3	bef	b
23	W.	29·86	29·80	51	65	38	66	NE	NE	2	4	b	b
24	Th	29·75	29·75	51	68	41	69	SE	SW	1	1	befm	bc
25	F.	29·80	29·78	57	65	45	66	SW	S	2	3	bc	bc
26	S.	29·45	29·53	54	59	52	60	SW	SW	6	6	qor (1)	qbcp 3)
27	Su.	29·66	29·68	54	58	46	59	SW	SW	6	6	qop (2)	qbc
28	M.	29·66	29·66	56	58	46	60	S	S	4	4	o	o
29	Tu.	29·90	29·96	56	62	50	64	NW	SW	2	2	o	o
30	W.	30·05	30·03	57	59	50	60	SW	SW	4	4	o	o
1	Th.	29·94	29·88	57	66	50	67	SW	SW	6	6	qbc	qbc
2	F.	29·85	29·85	55	63	48	64	W	W	4	4	bc	bcp 3)
3	S.	29·99	29·89	50	56	42	58	W	W	5	5	qbc	qbcp (4
4	Su.	29·88	29·80	51	55	40	56	NW	NW	4	4	bcp 2)	bcp(4
5	M.	29·87	29·81	46	48	40	52	NW	N	5	5	qbc	qoprh (3)
6	Tu.	29·76	29·70	41	51	36	52	NW	SW	1	1	bcm	or (4)
7	W.	29·62	29·60	44	46	40	48	N	N	2	2	op (2)	or 3) (4)
8	Th.	29·45	29·41	44	50	37	51	SW	S	1	1	op 2)	op 3) 4)
9	F.	29·48	29·46	45	51	39	53	NW	NW	1	1	o	bc
10	S.	29·44	29·46	45	55	34	56	N	NE	1	2	bcm	bcpt (3
11	Su.	29·76	29·86	46	54	40	56	N	S	1	1	o	bc
12	M.	29·74	29·73	50	55	45	57	W	NW	2	5	or (1 2)	qbc
13	Tu.	30·02	30·08	52	56	43	57	NW	N	5	5	qbc	qbcp 3)
14	W.	30·25	30·27	52	58	44	60	N	NE	5	4	qbc	bc
15	Th.	30·26	30·23	52	62	40	63	N	N	4	3	bcm	od (4
16	F.	30·28	30·27	54	56	46	58	N	N	4	3	o	og
17	S.	30·15	30·11	53	50	48	56	N	N	3	3	o	or (3
18	Su.	30·04	29·93	49	54	37	56	NW	N	2	3	bc	op (4)
19	M.	29·80	29·76	48	52	41	53	N	N	5	5	qbc	qop 4)
20	Tu.	29·82	29·82	48	52	38	53	N	N	5	5	qbcp 2)	qbcp (4)

April, 1845.—Mean height of the Barometer=29·824 inches; Mean temperature =46·9 degrees; depth of rain fallen 0·70 inches.

TO OUR FRIENDS AND CORRESPONDENTS.

On comparing Mr. McDougall's tables of Lights in the English Channel with those of the present time, we find the changes so considerable as to oblige us to defer the subject to our next number, when we shall give them correctly.

As soon as our Index is printed "An old Subscriber" will find ample notice of it.

HUNT, Printer, 3, New Church Street, Edgware Road.

Notes during a Run from Port Jackson to Hong-Kong, *in H.M.S. Vestal*, 1844.

Leaving the heads of Port Jackson on 22nd November at 6 A.M. with a fresh southerly breeze, steered E.N.E. for Lord Howe's Islands, which were made at 10h. 30m. A.M. of the 24th, bearing E.N.E. distant fifteen or eighteen leagues. From this position Lord Howe's Island makes as two rather flat-topped lumps, (the southern rather the higher of the two,) each with a low peaked extremity on the south side. At 5 P.M. when distant from Howe's Island about eight leagues, the junction of the two parts became visible, as also Balls Pyramid, bearing S. 80° E. distant about forty miles; the latter is a needle pointed rock nearly perpendicular on the north side, and on the south a shoulder projects about a third from its summit. Passed about four leagues to the westward of Howe's Island with light south-west winds and clear weather.

At 5 P.M. of the 26th having kept up N.N.E. from Howe's Island passed about five leagues to the eastward of the position assigned (in Norie's chart) to Sir Charles Middleton's Island, described as a very high peak, but nothing was seen from the masthead of this ship, though clear weather. From this steered nearly a due north course keeping a moderate easterly breeze (occasionally E.N.E. and N.E.) until the 2nd December when in 11° S., and 163° E., between Solomon and Queen Charlotte Islands, after twelve hours calm it again sprung up from north-eastward, light.

Steered N.W.b.N. for the Stewarts Islands which were seen from the masthead at 2 P.M. of the 4th, distant seven leagues; this group is composed of four islands and one islet, situated on one reef (apparently) common to all, of horse-shoe form open to the south, occupying a space of about six miles of longitude, and four of latitude, the south extreme being in 8° 30′ S., and the west, in about 162° 53′ east of Greenwich. The north island with two smaller ones to the south of it occupying the west side of the reef, and the eastern island which is apparently the largest, (about 1.5 mile in length) and probably Hogan Island in Norie's chart, lies on the south-east point of the Horse-shoe, with an islet or small lump off its north-west side about a third the distance toward the north island. They all appeared cliffy at the base, and thickly clothed with palm trees; table-topped and from 80 to 90 feet high; passing about two miles to the westward of the group some natives came off in canoes bringing poultry, and a fine fat pig, but having a ten knot breeze, the time could not be sacrificed by communicating. They were understood to speak English.

From this we shaped a course for the Raven Islands about N.N.W., making them at 9 A.M. of the 12th December, having kept from Stewarts Islands a moderate north-east breeze with the exception of two days, in 4° S., of light and variable weather during which we experienced squalls with rain. Crossed the Equator at midnight of the 9th in 160° E., with a steady north-easterly trade. It is worthy of remark that since crossing the southern tropic the wind has never been (excepting a few hours of unsteady wind) south of east.

The Raven group is composed of four principal islands, and three small patches or islets, stretching off the north point of the east island; the whole apparently on one reef of coral formation, rather resembling a harp in shape, and in extent about ten miles of longitude, by 5′ of latitude. According to three chronometers rated at Sydney, the centre of the group is in about 157° 30′ east of Greenwich, and the latitude of the south edge of the reef 5° 45′ N. To the south, the longest side of the reef is presented lying nearly east and west with an island on each extremity, and another (the highest of the group but smallest in circumference) about 2′.5 westward of the east island: about three quarters of a mile off the south-west end of the east island, also on the south edge of the reef is a conspicuous but small black rock, which at first was reported as a boat. From the east and west extremities the reef trends about N.W. and N.b.E., apparently coming to a point on which the north island stands, which is in the meridian of the middle island on the south edge. No opening appeared on the south side in the reef, but its continuance on either side toward the north island not being distinctly seen, it is probable such may have existed between the west and north islands, being the lee side, which appears a common feature in coral structure. Approaching the group from the eastward, the western island was not seen until abreast the east island, and the reef connecting them not being visible from the deck, it had the appearance of a clear passage between the middle and west islands, so that for a stranger making them late in the day it is necessary to approach them with much caution. All the islands are low and densely wooded, chiefly palms from thirty to fifty feet high. A few canoes approached, one of which reached on board containing three natives, but bringing no articles for barter; their object appeared to be to join the ship, asking as soon as they gained the deck, "You want man?" I thought it not improbable that some European or American seamen may have been on the islands, who had been landed from whalers, and now required a ship, as I some time since heard it to be a common occurrence with the crews of whaling ships, when they are, as the phrase is, "sick of the lay," or discontented, that they prefer being landed among the islands to continuing an unprosperous voyage. Another circumstance to account for this choice of the men is, that some illiterate and tyrannical men who occasionally command these ships find it to their interest to induce a portion of their crew, through exercising severe discipline, to leave the ship, when making up their complement with islanders, the lay, which would be due to the seaman, tends to augment that of the master.

These natives are a dark copper colour, and naked, excepting a short becoming petticoat of grass; they promised to bring a pig off in the ning if we would remain, but having fitted each out with a shirt, a social glass of grog, they took their departure it being now sunset. g the best of our way to the N.W.b.W. with light variable airs oomy weather for the two following days. On the 15th at 7h. A.M. saw land bearing N.W.b.N. supposed to be Jane Island, the n approaching the island veered and hauled between E.N.E. and 2. very squally with rain so that no satisfactory longitude could be ed, but as well as our means would permit the position of the island ed to be situated on the western extremity of an extensive reef,

stretching to the E.S.E. for two or three leagues, breaking heavily, and then apparently bending to the northward, in which direction (and bearing from the island we were then passing about E.N.E. three leagues) was indistinctly seen by the masthead-man only, another island. The western island which we passed to the westward of at a distance of two leagues or less was low, and resembling those of Ravens group. Nothing being seen to the westward I am disposed to consider this Island and one described by Horsburgh as, Jane Island, are identical, although their positions do not coincide, which under the circumstances can hardly be expected, when Captain Johnson who is named as the discoverer of Jane Island obtained his longitude by lunar, and from the state of the weather no great dependance can be placed in our observations for chronometer. The island reported to the north-eastward of this island is probably Meaburn Island in Norie's chart.

It is a subject for much thankfulness to the Almighty that these islands and reefs have been made under such favourable circumstances, allowing us to clear them before night, as it would appear that the position of many that are scattered about these seas depend on rather questionable authority, and as they are so directly in the track of shipping from New South Wales to China, during the north-east monsoon, a correct survey of the New Caroline Islands is very desirable. Until that is obtained, this neighbourhood should be approached with much caution, endeavouring to pass their respectively assigned positions during daylight. Leaving Jane Island at noon 15th with a moderate trade at north-east shaped a course for Rota Island which we sighted at 11h. 40m. A.M. of the 18th bearing N.W.b.W. distant five leagues, with a fresh trade wind at N.N.E. and misty weather. At 1h. P.M. passed the meridian of the north-east point (which is a low sloping extremity) placing it by chronometer in 145° 36′ E., and at 2h. P.M. passed the south-west extremity of the island distant seven or eight miles, which is in about 14° 10′ N., and 145° 28′ E. It is an isolated cliffy lump about 300 feet high, remarkably level in the centre with perpendicular cliffy sides for several feet from the summit, having the appearance of a fort, and sloping off towards the base, it is connected to the main part of the island by a low neck, which is not visible from a ship's deck until within a few miles, the main portion of Rota is also rather tabled towards the south-west, about 800 or 900 feet high, with bluff projections extending from it toward the south-east shore. The eastern or weather side appeared very sterile and only scantily sprinkled with vegetation.

Steering W.b.N. ½ N. from Rota for the Bashee Islands, passed on the following noon, along the north edge of a shoal, marked in the chart doubtful, but without seeing anything, and during the night our track was directly over the position assigned to these islands called "Spanish Islands" in Norie's chart, which was also not seen. A moderate trade from north-east and east carried us within 200 miles of the Bashee Islands by the 24th, when after twelve hours light and variable wind it freshened up at north with squally weather. At 10h. A.M. Dec. 25th made the Bashee Islands from north-west to south-west, and as the breeze was increasing to a gale with thick weather and a heavy north-easterly sea getting up, approached them under double reefed topsails and foresail, at noon passed through the Arniston Channel, latitude observed 20° 59′ N.

Found that we had been set since yesterday noon thirty miles to the westward and eleven miles south.

Going at the rate of eleven knots, and the weather stormy with thick rain, we had no opportunity for laying these islands down by our track, but I should think the chart supplied for the ships not to be subject to much correction as by transits and angular measurements between the different islands, the ship's position could not be decided on. The width of the channel I should judge about three or four leagues, apparently free of hidden dangers, the north Bashee Islands on the starboard hand are high and rocky, the southern one being the higher of the two, more peaked and irregular; off the north and south points of the northern one lie a detached rocky islet. The island forming the south side the channel (as made from the eastward) is of an irregular shape, having a high bluff at the north extreme, over which, a little at the back rises its rather peaked summit, from which it slopes to the south with a conical hill some distance inside that extreme. The chart published by Horsburgh is more satisfactory. The weather continued stormy until midnight of the 20th when it moderated. Passed Pedro Branca at 5h. 15m. A.M. 27th, and after being becalmed some hours close off the east channel, a breeze from N.N.W. obliged us to work up the west channel through very baffling winds. We did not anchor off Victoria Hong-Kong before 10h. P.M.

Notes on Borneo.

Next to New Holland, Borneo is the largest island in the world, containing an area of 300,000 square miles; being almost three times as large as the United Kingdom of Great Britain. From its size, no less than its central position, it seems destined to exercise a great influence among the neighbouring islands of the Indian Archipelago.

Face of the Country.—Near the sea, and along the banks of the principal rivers, the face of the country is in general low and marshy; while the interior is diversified with hills and valleys, crossed by high mountain ranges, and intersected by noble rivers. Pontianak, a Dutch settlement, fourteen miles from the sea, on the western coast, is situated at the confluence of two streams, the Kapwas and Landak; which uniting there form the Pontianak river. We followed the course of the Kapwas upwards, for more than two hundred miles, and learned that its source was still some distance further in the interior. We found it a noble stream, varying in width from one-fourth to one-half a mile. This river discharges its waters into the sea by no less than twenty-five mouths. The other branch, the Landak, though smaller, is a large stream, and has its source far in the interior. The Barnee river which falls into the sea on the north, and the Banjermassing on the south, are also very considerable streams. The island throughout its whole extent is remarkably well watered.

The climate varies considerably in different parts of the island, being of course much affected by the face of the country, and local circumstances. The more elevated regions of the interior are more healthy; but

the lower, and more marshy spots, near the coast, are rendered salubrious by dampness, and the exhalations that arise from the decomposed animal and vegetable substances, which are brought up by the tides of the sea, and left by the retiring waters to the action of the elements. The winds blowing over these districts are very unhealthy. The whole of the country about Pontianak, though distant, as before remarked, fourteen miles from the sea, is inundated by the tides. The highest path in the settlement, considerably elevated above the surrounding country, may, during several successive days, in some months of the year, be crossed by small boats. There is no dry season, but rain falls throughout the year. Sometimes in the months of July, August, or September, a drought of two or three weeks occurs. But even a drought of that continuance is much dreaded by the inhabitants; for the waters of the river, upon which, and upon the clouds of Heaven, they are dependent for their drinking water, become brackish, and the season is peculiarly unhealthy. At Pontianak the heat is rarely very great at any season of the year. We have frequently observed the thermometer at 74° of Fahrenheit, and once on the river as low as 72°.

Productions.—These are abundant and varied, in all the different departments of the kingdom of nature. The tropical fruits, particularly in the interior, are very abundant, and some of them, as the mangosteen, the pumalo, and the guava, are considered the best of their kind. Gold in greater or less quantities is found, among the lower hills, all along the western coast, and for some distance in the interior. Antimony ore is found at Sarawak on the western coast, is made an article of export thence to Singapore, and to other places. There are diamond mines also, the most numerous and profitable of which are found in the vicinity of Landak, a settlement about eighty miles from Pontianak, on the river of that name. Coal has recently been discovered in the northern part of the island. Among the principal exports from the island are gold dust, antimony ore, rice, rattan, beeswax, edible birds nests, &c. Cotton is grown also for domestic uses.

The soil, particularly of the interior, is evidently good, and well adapted to the cultivation, not only of rice and some other grains, but also of a variety of vegetables. The sweet potato, yam, egg-plant, radish, cucumber, pumpkin, and some others, thrive remarkably well. The cane is cultivated, and the manufacture of sugar is carried on to some extent by the Chinese in the vicinity of Pontianak. The cane flourishes better farther in the interior beyond the reach of the sea tides; but owing to various reasons, the cultivation of it has not been carried to a great extent. Coffee has been tried and does well in the vicinity of Landak. The Sago Palm is found in the interior and eastern parts of the island, and where most abundant, sago is said to be, in place of rice, the staple article of food.

Population.—The precise number of inhabitants on Borneo, it is not easy to ascertain. Calculations based upon facts, gathered by the missionary, must necessarily be limited and imperfect. His own personal observation can go but a little way, and those he enquires of, even men in authority, he often finds either incompetent, or indisposed, to give the requisite information. Nor are there any public documents to which we can appeal as throwing light upon this subject. Enough however is

known of the island to establish the fact, that its population is comparatively scarce. If we take as correct the estimate given in books (3,000,000, which is probably not very far from the truth) we have an average of 10 persons to a square mile. But England supports a population of 300 to a square mile. Under circumstances in which the powers of the soil would be drawn forth, and the resources of the country fully developed, taking as a standard countries by no means overstocked with population, Borneo is capable of sustaining sixty, instead of three, millions of inhabitants.

The population is of a very mixed character, consisting of Dutch, Chinese, Malays, Bugis, Arabs, Javanese, and Dyaks.

The Dutch have three settlements on Borneo;—one already noticed at Pontianak, one at Sambas also on the western coast, and another at Banjermassing on the south. Each of these settlements is on a large river, of the same name. Although the navigation of these rivers is impeded, particularly that of the Sambas and Pontianak rivers, by sand bars at their entrance; they are not badly situated for foreign commerce, and are admirably located for trade with the interior.

This the Dutch improve to throw their piece-goods into the interior, which they exchange for gold dust and rattan, and to supply the inhabitants of the interior with salt. This salt comes from Grisse on the island of Java, and from the traffic in it, the principal part of the revenue drawn from the island is derived.

There are officers of Dutch appointment at two stations along the coast, on each side of the mouth of the river Pontianak, and at two settlements on the branches of the river, some eighty miles inland. The Dutch Government has also sometimes interposed in settling matters connected with the native governments further in the interior. But a small part of the island however can properly be considered as brought under subjection to the Dutch Government, and the main part of it still continues independent. The Dutch residing on the island are simply those who are connected with the civil and military establishments, at each of the stations. Including the few Dutch soldiers in connexion with the forts, the entire Dutch population, on the island, does not exceed one hundred and fifty.

The Chinese are found principally in the two Presidencies of Sambas and Pontianak. Their number is estimated at twenty-five thousand. The great mass of them are emigrants, from a mountainous district on the borders of Canton province, and speak the Khek dialect of the Chinese language. The Chinamen here, as elsewhere, are noted for their enterprise and industry. In the towns and villages where they are found, they constitute, as merchants, and mechanics, the life of trade and business; and in the country, the most thriving gardens and plantations are in their hands. The great body of them are employed in working the gold mines. Direct trade and intercourse with China are kept up by Chinese junks; some six or eight of which annually during the favorable monsoon visit the two Dutch settlements on the western coast, Sambas and Pontianak. In these vessels, besides the trade they carry on, a large number of Chinese passengers are constantly coming from, and returning to, their native land. This circumstance gives to the Chinese population on Borneo, a more variable character than is usual in their colonies. For

the same reason too, we see the Chinaman, in dress and habits, more as he appears in the mother country.

The American Board of Commissioners for Foreign Missions, have a station for the Chinese at Pontianak, on the western coast. This class of people however are much scattered. But few are found in the immediate vicinity of Pontianak, and they are no where so situated that direct missionary effort can be brought to bear upon any considerable number. It is not therefore so much with a view to them, as to the Dyak population, that Borneo is considered interesting as a field of missionary labour. It is doubtful whether the Chinese branch of the mission will be much longer continued.

The Malays (according to Crawfurd) were originally from the country of Manangkabow in the centre of Sumatra. Thence they emigrated to the Malayan peninsula, from which it is supposed they derive their name, and in time found their way to all the neighbouring islands. They are almost, if not altogether, the sole occupants of the northern point of the island, and are found in considerable numbers at all the principal towns on the coast, and all the large settlements along the main rivers, and their tributaries. The whole of the interior, with very little exception, is under their rule. A few of them are employed in trade by boats with the interior; and in prahus and occasionally in square-rigged vessels, they carry on commerce, in a small way, with Singapore, the ports of Java, &c. They rarely engage in agriculture or gardening to any extent, and as a body are indolent in the extreme. We were once beseiged by a healthy young man, a scion too of one of the branches of the royal family at Pontianak, for a few coppers. His little stock of pocket money was exhausted, and, though he could not dig, he was not ashamed to beg. They are rather cowardly than brave, and noted for their treachery, and the low cunning with which they compass their ends. Like the tiger of their own jungles they "lie in wait to deceive" and destroy, and come stealthily upon their victims. The cutting off of the crews of the vessels engaged in the pepper trade on the Sumatra coast will serve to illustrate these traits of character. When circumstances have thrown Europeans completely in their power, they have been known to take advantage of, and insult them in the basest manner. Their treatment of the crew of "the Sultana" must be still fresh in the recollection of many of your readers. All the Malays of the north are notorious pirates. The seas all around the island are indeed remarkably infested with piratical craft. Acts of piracy about the mouth of Pontianak are by no means uncommon; though the river and neighbouring coasts are guarded by an armed schooner, and several gun boats. These high sea robberies too, are sometimes accompanied with murder in aggravated forms. As a specimen of the cruelty of the Malays, they sometimes attack sleeping boatmen whose cargoes they wish to seize, with sharpened sticks of a very hard kind of wood, the points of which have been farther indurated by the action of fire. The wounds inflicted by these weapons are very deadly, and, if they do not prove mortal, are very hard to cure. The kris too, a formidable weapon in itself, is made more cruelly effective, by being of crooked form, with jagged edges, and covered with a deadly poison. The kris is much worn, particularly by the higher classes, and as in Malay history associated with many a tale of blood.

The Malays are all of the Mohammedan religion. They are exceedingly ignorant. But a small proportion of them can read their own language intelligibly. The Koran is not translated into the Malay language; and none but the Hajis or native priests can read the Arabic. Hence the book that contains their religion is a sealed book; and all they know concerning its precepts, is drawn from their priests. Though bigotedly attached to, and punctiliously careful in the observance of, many of the outward rites of their religion, as fasting, prayer, abstaining from pork, &c., multitudes know little of the reasons of their conduct, and some do not even know the name of the founder of their religion.

Their language, from the large proportion of vowels in the words, is peculiarly sweet, and easy of pronunciation. From this circumstance, and the simplicity of its structure, being easy of acquisition to foreigners as far as regards terms in most common use, it has become the great medium of oral communication in the ordinary business of life, not only between the Malays and others, but between the different tribes of the Archipelago. They have at present no alphabet of their own, but use the Arabic character. There are some ten or twelve thousand of them in Pontianak, and many tens of thousands in the various settlements, on the river in the interior. No missionary on Borneo labours exclusively for this people. The Dyak missionaries being well acquainted with their language, and coming necessarily much in contact with them, devote some attention to them. Their bigotry, exclusiveness, and extreme jealousy of every thing that interferes with their religious sentiments, make the Malay population of this island, and of the Archipelago in general, a most hopeless class to labour among.

The Bugis are natives of the island of Celebes. There are about 3000 of them in Pontianak, and they are found, to some extent, in all the large settlements of the interior. They have in general less of treachery, and more of industry and enterprize, in their character, than is to be found among the Malays. As a people too, they are more generally engaged in traffic with the ports of the Archipelago, and the towns of the interior. They have a language and alphabet of their own, but the mass of them make use of the Malay tongue. In religion they also are Mohammedans. If we except the distribution of some religious tracts, and occasional conversations with them by the missionaries on the island, nothing is doing for them in the way of missionary effort. With less of religious bigotry, and being less on the defensive against the entrance of the truth than the Malays, we always found them more ready to listen to religious instruction, and more willing to receive Christian books.

The Arabs number about four hundred in Pontianak, and perhaps not as many more on the whole island. They claim our notice therefore not so much from their numbers, as from the position they occupy, and the consequent influence they exert. The settlement of Pontianak was founded about the year 1790, by Abdul Rehman, an Arab chief. The present sultan is his son. The Arab population consists principally of the descendents and friends of this royal family. The sultan receives from the Dutch Government the sum of 3000 guilders per month. He and the Dutch Resident meet once a week, alternately at their respective dwellings, ostensibly for the purposes of business, in connexion with the government of the settlement. Some of the sultan's brothers hold high

offices under the Dutch Government, and all have high titles, and peculiar privileges and immunities. In fact, whatever may be their motives, it is evidently a matter of studied policy with the Dutch authorities in every way to favour this class. Hence they hold their heads very high, and move about in state, with numerous attendants, and much showy pomp. From their closer connexion too with the founder of their religion, and their ability to read the Koran in Arabic, they arrogate to themselves, with no small degree of pride and self-complacency, the privilege of being considered in all matters that pertain to their religion, teachers and leaders. Throughout the mass of the Mahommedan population therefore, who are not disposed to dispute their claims, the leaven of their intolerant bigotry and extreme exclusiveness is thoroughly diffused, and in no people is it more observable than among the Malays. This numerous class is thus rendered more difficult of access, and the prospect of permanent benefit from missionary labors, is rendered more hopeless.

Of the Javanese, some are found among the native soldiery, and some are living in the settlements on the island. In religion they are the same as the Malays, and in their appearance, character and habits of life, so like them, and withal so few in number, as to be unworthy a separate notice. The same in substance may be said of other individuals from the different islands of the Archipelago. Of all the classes, however, already noticed, more is and may be known from published works, and from other sources, than respecting the people yet undescribed, and to whom we would now invite special attention.

The Aborigines of the island of Borneo, constituting by far the largest proportion of its inhabitants, are known by the general name of Dyaks, or as the Dutch sometimes write it, Dyakkers. The larger bodies of them are found inland, rather than upon the sea coast. None are living near the Dutch settlements, and they are rarely seen even there. In our tours in the interior, we but rarely saw their dwellings on the banks of the large streams, and never as forming a part of the more considerable Malay and Chinese settlements. Like the Indians of North America, they are partial to a wild forest life, at as great a remove as possible from all that marks civilization, and, as it advances, they retire before it, and plunge deeper into the jungle. Their most favourite building spots, and locations for their villages, are on the higher hills, along, and near the small streams which are numerous in the interior, and which afford them ready means of communication in their little canoes, with the Malay and Chinese settlements on the main rivers, where they come to exchange the products of their fields, and their rude fabrics, for the few necessaries they require. Far in the interior, if report be true, are tribes exceedingly rude, and savage in their habits and modes of life. Their only dwellings, it is said, are caverns, and holes in the earth. They subsist on sago. They do not visit the villages on the large rivers for purposes of trade. Those who wish to traffic with them pursue the following method. Having deposited the articles they wish to barter in a place appointed for the purpose, they strike upon a suspended stick, which becomes at once a notice of their retiring, and a signal for the Dyaks to advance, who having taken up the articles left and put in their stead what they consider a fair equivalent, strike the well known signal, and retire. The first persons then again come forward, pick up their bargain, and return. Thus the

traffic is begun, carried on, and ended, without the traffickers seeing each other's faces. The story is given as drawn from different and independent sources.

The Dyaks generally congregate in villages. The houses in these are not built separately, but joined one to the other in the shape of one long building, each door marking the residence of a family. So uniform is this, that from it has resulted the common mode of reckoning the Dyak population of the interior by *lawangs* (doors). Their dwellings are set upon piles and raised some ten or twelve feet from the ground. Out in front, and on a level with the floor, runs a kind of platform of round poles fastened to the timbers underneath. On this the rice is laid to dry, and is threshed out by treading it with the feet, the grain falling through between the poles to the earth below. Their houses are of the cheapest materials, and of the rudest construction. The floors are of split bamboo, or round poles lashed by rattan to the timbers ; the walls of tied or interlaced bamboo, and sometimes of bark ; and the roof thatched either with *atap*, a species of palm leaf, or with *lalang*, a kind of long wild grass, which grows spontaneously and abundantly all over the island. The articles that go to make up their domestic and culinary establishments, are very few and simple.

Many of them, perhaps much the larger proportion, are employed in the cultivation of the soil. Rice is with them the principal article of food. Of this they raise not only for their own consumption, but for the supply of their indolent and lordly masters, the Malays. There is another species of grain apparently very farinacious and nutritive, somewhat resembling pearl barley, which is very commonly cultivated among them. In passing through their clearings we sometimes observed the stumps of the trees left standing higher than our heads. The trees in these cases had been cut down with the *paraag* or large wood knife. When the ground has been roughly broken up for the reception of the seed, it is inserted singly by the hand in holes made with a pointed stick. This at least is sometimes practised, but perhaps is not of general adoption. The plough is unknown among them, as far as our knowledge extends, and every thing is necessarily done by hand as there are no oxen, horses, or buffaloes. Every thing that met our observation, as we passed through the island, convinced us that agriculture was in a very rude and imperfect state ; yet there was that in the appearance of the crops, despite all these disadvantages, which gave us strong proof of the capabilities of the soil, and cheering promise of what, in a more advanced state of cultivation, might be looked for. A very few of the Dyaks are employed in the gold mines ; more in digging for diamonds in the vicinity of Landak ; but the working of the mines is almost exclusively confined to the Malays and Chinese.

We have before spoken of the growing of cotton on the island. There are two tribes, on the branches of the Kapwas, by whom the cultivation is carried on to a considerable extent. While in the interior, we saw much of this cotton, principally in the hands of females, Chinese and Malay, undergoing the various processes of preparation for, and manufacture into, cloth. We saw also at Sintang, the highest point we visited in the interior, garments worn by Dyaks made from cloth of their own manufacture, and from cotton of their own growing. The fabric was

coarse, but of firm texture, and ornamented with interwoven block-work and figures of various kinds. Cloths of their manufacture were then offered us for sale, of which we obtained some specimens. They know something of the art of dyeing. They make baskets and various articles from bamboo beautifully, and prepare ornaments of various kinds for their own wear. But that for which they are most remarkable is the manufacture of knives. Some of the rudest tribes excel in this. The wild Kyens already noticed, who live near the source of the Kapwas, almost in the centre of the island, make knives which are remarkable for the beauty of their workmanship, their high polish, excellent temper, and keen edge.

In personal appearance the Dyaks are superior to the Malay race. They differ but little in complexion from them, but have more expressive and intelligent features. They are also taller, more athletic, and better formed. We saw some men with the firmness of whose personal appearance we were particularly struck; whose neat and graceful forms and long black hair flowing loosely over their shoulders, forcibly reminded us of the Indians of North America.

In their villages the men wear only the *chowat*, a small garment wound around the loins, and hanging down in front, in the form of a small apron. This is frequently made of bark, beaten with a stick to render it soft, and pliable. When they visit the settlements on the large rivers, they wear a short outer garment in addition. The females wear a single garment larger than that of the men. Both sexes discover, in a great degree, the passion for ornaments, so common to all the eastern nations; and have them in great profusion about them, of many different kinds, and of a great variety of materials. The ornaments of one man who took his seat in our boat we particularly noticed. He had several strings of beads on his neck. His ear pendants were Dutch quarter guilders. On his arms above his elbows he wore rings of polished wood, and cocoa shell, and about his waist a string of sea shells. On his left side, hung a small basket with separate compartments for the various articles used by the betel chewer and tobacco, of which the Dyaks are immoderately fond. From the same side was also suspended a small sheathed knife used for ordinary cutting. On the left side hung the large knife-sword used in their head hunting expeditions. Dyaks are rarely seen wholly unarmed.—Tatooing is practised by some of the Dyaks, particularly by tribes in the vicinity of Banjermassing. Having pricked the skin, they use for colouring matter, the sap of a particular tree. They sometimes cover their entire bodies with tatooed figures.

Cannabalism exists among the Dyaks. While in the interior, we saw individuals whose teeth were filed to a point like the teeth of a saw, giving them a peculiarly ferocious appearance. The practice is said to be common in the tribe to which they belong, who are noted cannibals. This unnatural custom probably prevails to some extent among other tribes. They do not eat indiscriminately all parts of the human frame, but select the brain, the tongue, and other parts by them considered peculiarly delicate, and throw the remainder away. The young are early taught to accustom themselves to this horrid practice. A taste of human flesh is given the young warrior when he enters upon his career, to nerve his arm, and make him courageous. "How could we be brave," said one

man, "if we had never tasted of human blood?" A Malay with whom we conversed had seen them making their meal on the human frame.

Another custom analogous to this, and most bloody in its character, prevails throughout the whole island. The whole of the interior is split up into a great number of petty tribes, between each of which and all the rest, the most unrelenting hostility and bitter feuds prevail. No man considers himself safe beyond the limits of his own particular tribe. Hence, when we employed Dyak coolies in the interior, we could never induce them to go beyond the limits of their own district. Of an individual of any one tribe, relatively to all the others, may be said what was said of Ishmael: "His hand is against every man and every man's hand is against him." It is never with them a time of peace. The sword never rests in its scabbard. They are constantly sallying forth on their bloody expeditions, sometimes in companies of three or four individuals, sometimes in bands of three or four hundred. But it is not enough simply to decapitate their enemies,—they must secure their heads, bring them back, and hang them up in their dwellings. These not only prove the Dyak's prowess, but constitute his property. His wealth is estimated by their number. They add weight to his character, and enhance his respectability among the members of his tribe. If remonstrated with, and told that they should sheathe their bloody knives, and resting from the work of mutual destruction, love each other as brethren, they reply, "What shall we do if we have a debt? Shall we not repay it? On a previous occasion the heads of some of our friends were cut off by a neighbouring tribe, and can we rest until the injury is avenged, and we have decapitated some of them in return?" The payment of this debt the son is taught by the dying father to consider as the most binding of all obligations. But the payment, so far from settling the matter, only creates a fresh demand for blood. Thus a kind of running account is kept up from generation to generation, not to be finally settled, we fear, until they shall have been taught to forgive and love. Even the females of Borneo abet the bloody custom, refusing the hand that does not bring a certain number of human heads. In fact all the influences brought to bear upon the mind of the poor Dyaks, long established custom, early training, example, and the force of public opinion, combine to keep up, rather than frown down, the horrid practice.

As it at present exists among them, it serves rather to exhibit an awful state of society, than to prove the peculiar ferocity of the Dyak disposition. These aborigines are in general mild and inoffensive in their manners, and kind and hospitable in their treatment of strangers. The traveller among the Dyak villages lies down without concern, and sleeps quietly, where the walls and ceilings of the apartments are abundantly decorated with human heads. Though apparently so closely interwoven with the framework of society, the practice has been abandoned by some tribes who have come more immediately in contact with the more civilized Malays, and, in conversation with Europeans, others have expressed their willingness to discontinue it. And certainly a thorough reform in this matter cannot come too soon. The number of the poor Dyaks who have already fallen, in these sanguinary conflicts, is by no means inconsiderable. At Sangow on the Kapwas river, we learned that some five hundred had *been killed by the* neighbouring tribes during three years previous to

our visit. But this is only one among the many districts of this large island, over the whole of which, the work of death, in this form, is constantly going on.

A Dyak full armed and setting out on a head hunting expedition, is in reality a formidable being. In his left hand he holds a wooden shield with a slightly concave outer surface, and of dimensions sufficiently ample to protect the whole body. The same hand grasps a barbed iron hook, shaped like a fish hook, about eighteen inches in length, and half an inch in diameter. This is farther secured to the left arm by a noose passed round the wrist. Having struck his enemy to the earth with the spear which he poises in his right hand; he next drops his shield as now useless, and strikes the hook deep into the head of his victim to make it his own. He then draws his heavy knife from its scabbard, severs the head by one stroke from the body, and returns, bearing his prize, to adorn the walls of his dwelling.

The Dyaks as a people are extremely oppressed by their rulers. In their villages there is generally a head man of their own people, who is looked up to for counsel and advice by those around him, and who is considered to a certain extent as representing the village. Whether this be an office of Malay origin, or an original institution of the country, it seems to be continued at present rather as a matter of convenience than any thing else. These headmen possess very limited authority, and cannot act in any matters that affect the general interests of a tribe, independent of the Malay chiefs, in whose hands, as before remarked, the government of the interior is lodged. The principal men of the few purely Chinese settlements, do indeed exercise authority over the Dyak tribes in their vicinity. Their sway, however, extends over a comparatively small portion of the island, their government is mild in its character, but the Malays rule with a rod of iron. Their subjects are spoken of and treated by them rather as beasts of burden than as rational men. While on the sweat of their brows their indolent masters live, and fatten, they force them to labour without any adequate compensation, and often drive them to it with the lash. This condition at best is but a form of slavery, and that not of the lightest description. In traffic, too, they are shamefully imposed upon and defrauded by the Malays, exchanging the products of their fields for iron, the coarser kinds of piece goods, salt, &c., articles which they cannot procure elsewhere, and which they cannot do without, always greatly to their disadvantage. The Dyak subjects in some cases pay to their respective masters a monthly tribute in rice, or some other product, and in others render a specified amount of gratuitous service. The Malay Rajas of the interior sometimes dispense with both of these, reserving to themselves the privilege of asking as a present such articles as they may fancy, as they visit from time the villagers under their rule. This mode of government which, as it imposes no formal tax, seems the easiest to the Dyaks themselves, works the most oppressively, leaving them wholly at the mercy of their rapacious masters, whose demands, however unreasonable, they dare not refuse.

The Dyaks have no written langnage. The first efforts to reduce the language to writing were those set on foot by the German missionaries at Banjermassing a few years since. The colloquial dialects on the island are numerous, and, though they are similar to each other, and all resem-

but every one of them has proved a failure, and these heartless scoundrels still continue year after year to revel in their trade of human suffering, and it may be added blood.

To give an example, and with very few exceptions it is a true one, let us suppose a ship at Bombay is bound late in the year for China by the eastern passage. Her Parsee owner sends cotton or other cargo on board till every crevice under the upper deck is entirely blocked up, thus no room whatever is left for the unfortunate Lascar crew who can have nothing but the deck to sleep on, and only the canopy of Heaven for a cover. The ship being ready for sea the Ghaut Serang is employed to ship a crew, and these are sent on board in something like the following proportions: First, about a third who according to circumstances may be more or less considered seamen; these include the ship's Serang or Boatswain, &c., and the 1st and 2nd Tindals, his mates; the first having charge of the whole financial concerns of the crew, and receiving on the ship's return to port the balance of wages due to them, which he pays them in his own way. The 2nd third have been to sea before, which is probably all that can be said about them, but the last third have probably never seen salt water in their lives, consisting of hill coolies and bullock drivers, trepanned under false pretences; indeed there is an instance on board a ship at present at Whampoa of a coachman, aged 70 years, now on his first voyage to sea, having been sent on board by the Serang probably to make up the complement.

The crew having come on board, the Ghaut Serang receives six months advance of wages, into his own hands, and the ship goes to sea, it is then found that each man has been furnished with a chest, a few clothes, and a small portion of fish and curry stuff, the first only lumbers the deck, the second consists only of a few rags, and the third probably lasts for about ten days, after which plain rice and a little ghee provided by the ship, constitutes their whole and only food. Surely, when protectors of slaves, protectors of coolies, and even protectors of animals are rife, some sort of similar appointment might be made in favour of the poor Lascar, who is so often the victim of so much tyranny. A vessel leaving Bombay about the middle of September may be expected to reach China by the middle of January. Every one knows the coldness of the weather there at this time, and can fancy what it must be to the Lascar in his scanty cotton dress on his arrival after a passage of 100 days at sea, during which he has subsisted on miserable food, exposed on deck night and day to all the vicissitudes of the weather; and who can wonder if a large mortality takes place from scurvy, a disease now almost unknown; so much so, that few medical men have ever seen a case.

When the voyage is made direct, and with the monsoon, Lascars are more comfortable, the ships are generally larger, the weather fine, the wind fair and the passage short (about five or six weeks) and they have room below in harbour and on the return passage. In Opium Clippers however the case is far otherwise, the vessels are smaller, and in one or other passage always working to windward against the monsoon. So much are they dreaded that few good men will voluntarily ship in them, the consequence is that they are often manned with the most miserable *wretches* possible, who but for the superior working qualities of this class

of vessels would perhaps be unfit to manage them. Exposing these poor wretches up the east coast of China during the north-east monsoon without warm clothing is positive cruelty, which we are glad to say is only sometimes done.

Laws something like the following should be made.

1st.—No vessel should obtain her Port Clearance till it has been ascertained that room has been left for the whole crew and their chests.

2nd.—On arrival in China it should be ascertained that the room so left has not been filled up at any port at which the vessel may have touched on her passage.

3rd.—The Ghaut Serang should be compelled to furnish each man with clothing suitable for the voyage; if to China, at least one suit of warm clothes each.

If such laws were adopted and were compulsory by enactment on all, the number of Lascars as well as their quality would be much increased. As the case stands at present no man can stand against the Serang; if he wishes to get his ship to sea as soon as his neighbour, as he acts so must he.

One of the most dreadful diseases to which the Lascar is subject is Benny Benny, in it the patient swells to a prodigious size. Of this there have been several cases all of them fatal. Eminent medical men who have known the disease in India say that *is caused by exposure and meagre diet.*

Ice in the North Atlantic.—*By W. C. Redfield.*

(Concluded from p. 303.)

On the Westerly tendencies of the Polar Ice-currents, and their influence on the Gulf Stream.

In further noticing the westerly and southerly progress of the cold currents from the arctic regions, we avail ourselves of the researches of Rennell, who states that "a current from Greenland and the Arctic Sea joins the gulf stream on the east of the grand bank of Newfoundland, somewhere about latitude 44°, and between the meridians of 44° and 70°. In the month of May its direction has been found to be between S.W.b.S. and S., and its temperature (apart from the ice,) 43° to 47° of Fahrenheit. The temperature taken not far to the eastward of it was 62° to 63°, and an easterly current of 30 miles per day of the same water, (i.e. gulf water,) was found at a distance from the eastern edge of the S.W.b.S. cold stream. This is, doubtless, the current that brings down the ice from Greenland, &c. to the east of the bank of Newfoundland, and ice has been seen in the line of this very current, by different persons in different years. The navigators to Newfoundland and New England place the junction of these currents in about latitude 41°, longitude 49°, which shows how erroneous their ideas are on the subject."

Rennell likewise states that "there is also a smaller (?) current that passes down the coast of Labrador, and eastern side of Newfoundland,

sweeps over the southern part of the bank as a surface current, when unimpeded by the ice. When the ice appears in great quantities it is probable that the gulf stream current coming from the west, carries the ice more eastwardly, from its previous south-westerly course. In thus yielding to the joint influence of the two currents, the surface ice assumes a new direction, towards the south or south-east.

Grounded icebergs, when quite stationary, afford the best means for observing the course of the common ice fields. The course of the ice-drift, within the influence of the gulf stream, doubtless varies at different times and localities, and must be greatly influenced by the depth of the floating masses. For in the case of icebergs or islands, particularly those which come down from the Greenland seas and pass eastward of the grand bank, their great depth subjects them to the continued impulsion of the lower or arctic current, after they arrive within the influence of the gulf stream; the main part of the cold current passing beneath the warmer one, by means of its deeper position, as well as greater specific gravity.

This may be shown from the cases before recited, of immense icebergs which have been impelled into the body of the gulf stream, where, instead of being drifted off to the eastward, in conformity with its course and with the like tendency of the prevailing winds, some of these floating islands have been forced across the body of the stream, and in some cases even far beyond its ordinary limits, to a latitude lower than that of the southern boundary of Virginia; as shown in the two cases given by Capt. Couthouy. The most eastward of these, in longitude 39°, and south from the usual eastern limit of the Greenland icebergs that arrive in the latitude of the banks, was near seven degrees lower in latitude than the southern extremity of the grand bank. The other icebergs, in like latitude, and longitude 67° 35′, probably passed near to Newfoundland, and their position shows, in a more striking manner, the strong westwardly tendency of the polar current.

No impulsion but that of a vast current, setting in a general south-westerly direction, and passing beneath the gulf stream, could have carried these immense bodies to their observed positions, on routes which cross the gulf current, in a region where its average breadth has been found to be about two hundred and fifty miles.

The continued south-western, and even more westwardly course of that portion of the polar current which is found southward of Newfoundland and Nova Scotia, and west of the gulf stream, is conclusively shown by the two icebergs met with by H.M. packet *Express*, July 7, 1836, on the southern edge of the Sable Bank, about seventy-five miles south-west from Sable Island. The highest of these, estimated at 180 feet, was in latitude 43° 14′, longitude 61° 17′, the other, 150 feet high, in latitude 43° 09′, longitude 61° 26′. Owing to the great depth of these ice islands, they could not have passed through the strait of Belle Isle, but must have been carried by the main current eastward and southward of Newfoundland to their observed position, which, by the nearest course, is near 500 English miles from off Cape Race, the south-east point of that island, in the direction S. 63° W., true meridian, or W.S.W. ½ S. Of the further extension of this portion of the polar current, in diminished force, along the coast of the United States, and the western border

tion of the river showed the surface water at 57°, at half a fathom depth 44°, 5 fathoms 40°, 10 fathoms 38°, 100 fathoms 35°. At Tadousac, about half way to Quebec from the place of the last observation, Dr. Kelly found the temperature, in September, as low as 36°, after an easterly gale, which mingles the shallow stream of the surface with the deeper waters. Numerous other observations made at different times and places during the survey confirmed these results. Hence it appears that the drainage waters received by the rivers were discharged by means of the surface current, which swept over the cold subjacent waters that were brought in by the polar current and the flood tide. These facts should be remembered in viewing the relations of the polar currents to the gulf stream.

In relation to the southern outlet of the Gulf of St. Lawrence, it has been common for navigators and others greatly to overrate the proper *river* current of the St. Lawrence, in its extension southward of Breton Island and Nova Scotia. This fresh water current, when compared with the branch of the polar current, which joins it through the strait of Belle Isle, is but of insignificant volume; and the current through this strait, in its turn, is but an ocean rill, when compared with the great volume and force of the cold currents which pass to the eastward and southward of Newfoundland.

It appears that Rennell was embarrassed in his investigation of the polar currents of this region, by admitting the assumption that a portion of the cold water, eastward of Newfoundland, was caused by the bank itself. This hypothesis had been sanctioned by distinguished writers, but the observations and facts on which it was founded can now be satisfactorily explained by the admitted influence of cold currents, either superficial or sub-aqueous. He appears also to have viewed the gulf stream as opposing a direct obstacle to the further passage of the polar currents, but it appears to us, that the streams of existing aqueous currents are found intersecting each other, much in the same manner as they would pass through quiet waters, and that they quietly impose or imbed upon each other, like as stratified currents of air, or lateral currents from the forks of rivers are found to accomodate each other in their respective courses. In these river cases, as apart from the extraneous deflection by the shores, while the original momentum of each stream continues, one of these may be borne away from its original course, and thus be resolved to a new or modified direction by the further progress of the current in which it is imbedded; but in such cases, a diversion of the course of the lower current does not usually take place.

In the case of ocean ice-currents which intersect a surface cross current, while the common *surface ice* conforms more or less nearly to the new direction of the current on which it floats, the deeply immersed ice masses, having probably their greatest bulk immersed in the lower or deeper current, are thus resolved, by a real conflict of impelling forces, into a still different course, which conforms more or less nearly to that of the lower or sub-aqueous stream, according to the respective areas exposed to the action of the two currents, and their respective velocities. The geographical course of the body of the gulf stream, according to our best information, commonly touches the southern point of the grand bank in latitude 43° N., but the overflow, or outspreading portion of the stream

sweeps over the southern part of the bank as a surface current, when unimpeded by the ice. When the ice appears in great quantities it is probable that the gulf stream current coming from the west, carries the ice more eastwardly, from its previous south-westerly course. In thus yielding to the joint influence of the two currents, the surface ice assumes a new direction, towards the south or south-east.

Grounded icebergs, when quite stationary, afford the best means for observing the course of the common ice fields. The course of the ice-drift, within the influence of the gulf stream, doubtless varies at different times and localities, and must be greatly influenced by the depth of the floating masses. For in the case of icebergs or islands, particularly those which come down from the Greenland seas and pass eastward of the grand bank, their great depth subjects them to the continued impulsion of the lower or arctic current, after they arrive within the influence of the gulf stream; the main part of the cold current passing beneath the warmer one, by means of its deeper position, as well as greater specific gravity.

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of the gulf stream, as far as Cape Hatteras, if not to Florida, we have formerly spoken in another place.*

The finding of a low temperature on the southern part of the grand bank, or even to the southward of latitude 43°, is not sufficient evidence of the entire absence of the gulf stream current; for the recent presence or proximity of floating ice must necessarily cause a great reduction in the surface temperature, and there is no natural process by which the cold water of the surface stream can be changed for warmer with a rapidity sufficient to preserve a temperature at all corresponding to the warm portions of the gulf stream.

It is well known that vessels in the northern part of the gulf stream, while steering parallel to its general course, have met with successive and striking changes in the temperature of the water, and sometimes with ice, to the southward of Nova Scotia and Newfoundland, and in the proper line of the polar current. This is well shown in the journals of the ships Eliza and Grand Turk, as published in some former editions of the Coast Pilot. In latitude 41° 53′, longitude 56° 52′, the Eliza found the water at the depth of 70 fathoms, two degrees warmer than that at the surface, the temperature of the latter being 40°, and an ice island bearing S.S.E., distant seven miles. S.S.W. and S. of the grand bank, and in nearly the above latitude, the Eliza again met with cold water, and passed several ice islands. Rennell has also recognized these cold veins or bodies of water in the gulf stream. It appears, therefore, that in this portion of the gulf stream, neither its presence nor its actual limits can be determined with certainty by the thermometer, during the ice season.

It appears in the pages of the Coast Pilot, that Capt. Billings, in June, 1781, found the temperature of the water in the gulf stream to have fallen 10 degrees, in latitude 39°, southward of the bank, and that the like had been observed by Dr. Franklin and Col. Williams, in the same region. But, judging from the latitude, it is not improbable that these observations were made to the *southward* of the true border of the gulf stream. If this be the true solution, it is indicative of the partial re-appearance of the polar current, after passing beneath the gulf stream, and there is evidence of its further course to the south-west and W.S.W., near the outward border of the stream.

This leads us to notice a probable, if not a principal cause of the great variations, which have been reported, in the position and limits of the gulf stream in its eastward progress. Rennell, we conceive, rightly supposes an *overflow* or outspreading of the gulf stream upon the ocean waters, as it proceeds in its course. Now we know, from well established cases, that overflowing streams, upon denser waters, are often very shallow; and Capt. Bayfield has shown, in the case of the estuary and Gulf of St. Lawrence, that the effect of a storm is to break up, for the time, this superficial current, and amalgamate it with the deeper and colder waters. Hence we may infer, that in good weather and a smooth sea, the thermometric breadth of the gulf stream may be far greater than in rough weather; and that it is most straitened in its limits after the occurrence of a great storm.

* American Coast Pilot, 13th edition, 1837, page 666—668.

Nautical Rambles.—The Leeward Station during the War.

Port Royal and its Associations.

(Continued from p. 314.)

Mizen had balanced his perceptions at least; unlike those of his superiors of the brig, his were poised, pointed to, and fixed upon the object of his mission, with him purpose was never unsettled. I found he had got half way down the cargo of nuts. "Well Toggle, my boy, I think we shall sight the 'plata' presently." "Why do you fancy so?" "Fancy! pshaw! did you ever hear of coals being sent to Newcastle, eh!? "True, its an odd cargo for Carthagena." "Aye! there's dunnage below, take my word for it, and we know that Jack Spañole thinks dollars are the best ballast in the world, (looking into the hold) come, be smart lads, up with them."

I agreed fully in the plain common sense decision of my messmate, and was about to descend into the hold, when up went the Dutch ensign, accompanied with the pop of a musket, the schooner, at this time, being out of hailing distance. "Confound it, what do they want now?" "Oh! its another naranjazo, I'll bet a mac," said I, as I jumped into the boat. All was bustle in the little brig; the men were aloft, loosing top-gallant sails and royals, and one or two officers were at the mast-head with their glasses. Ah! thought I, its a sail, one of those free-and-easy gents that was the cause of my losing ten-thousand—what? Why, the master, who was a calculator as well as a linguist, had estimated the mid's share in pounds, but we will say—dollars. Now I began to wish them all safe in the hands of the guarda costas, I mean the force traders, but I had scarcely seated myself in the stern-sheets, ere my conscience began to upbraid me for such an unchristian wish, it told me very plainly that unless I retracted, I should be a scoundrel and a false accuser; and I had just begun the recantation with a "God forgive me," when having arrived in hailing distance, I was ordered to go back, and desire Mr. Mizen to unbend all the sails, and send them with the two carronades on board the brig, unship the rudder: (this was old Sounding's scheme,) and bear a hand, (this was the Captain's.) Well, thought I, (it was a piece of impudence in a mid, I'll allow,) there are some people in the world who, with all their light, would never "set the Thames on fire." I do not in this, or rather, I conclude I did not, mean to infer that these people were either fools or idiots: no, they may be very accomplished, clever, scientific,—but for all these, want plain common sense. That the reader may clearly understand me, I give an example. I once had the honour of perusing the MS. Travels of a Rev. L.L.B. on the continent. In speaking of some cathedral, he contrasted it with St. Mary—— "that graceful, *light* and *airy* structure:" well this same St. Mary's is the very *heaviest*, as it is the largest, parish church in England! Now this most worthy man was one of the best Greek scholars in Britain, besides being, as may be supposed, a very learned gentleman. Now it seems clear that a man who could not tell a heavy from a light building, (for it is not a matter of talk,) must lack common sense, though he possessed all other. When I told Mizen, he did not appear to be much surprised, his mind

being prepared for something extraordinary; he observed, however, that he concluded he was to be left with a hand or two. "I can't tell you, but I rather opine not." "What! do they mean to leave the craft to take care of herself, where are their eyes?" "Oh! dead to windward, N.N.E.," said I interrupting him." "Ah!" accompanied with a heavy groan.

The sails and guns were soon in the boat, to which was added, upon my messmate's own responsibility, the little canoe belonging to the schooner. As soon as the things were out of the boat, the doubtful Spaniard descended, and I was directed to convey him to the schooner, and bring Mr. Mizen and the men back to the brig.

After delivering my charge and message, I jumped into the hold to hurry the men up: by the time this was effected, the brig having edged away, was close to, the Captain hailing to know what detained us. The pertinacious Mate, still dreaming of dollars, and determined that it should be no fault of his if we did not rescue them, called out, "Shall I remain on board with two hands? we are close upon the dunnage, and (by way of enticing compliance I presume,) I think she has treasure on board." "To-morrow, to-morrow, Mizen," said the good tempered commander. "To-morrow, mañana, bueno, bueno," muttered the supposed Spaniard. "What's that you say," demanded the Mate, turning fiercely upon him, "you've dollars on board: where are they stowed?" "Diablo! no, que yo sepa," was the dry answer, accompanied with a shrug. "Come bundle into the boat, and let her go to the d——" said the mate, overpowered with the disappointment: "Shove off." "Senores, adios," with a wave of the hand saluted us as plash went the oars; the mate turned his back sullenly upon the utterer of the "good bye,"—was it the last sounds of his voice we should hear? Time develops all things. "He must be a clever fellow without sails or rudder to get away before we can catch him again," said I, as we pulled on board. "Pshaw! you may take your last look at him, or I'm no prophet, he's in the easterly set here, and when we stretch into the offing we shall tumble into the westerly current, and then——" "Aye, aye, I understand, and then we may whistle for him," I said, closing the colloquy.

The boat was run up, and we were soon in chase. The vessel which had thus diverted our attention from the search among the cocoa-nuts, was a rakish schooner, apparently a privateer, or a guarda costa, in chase of two other small vessels. In a few hours we were near enough to observe her close to a sloop, which had her sails down. Ahead of these, and rather to windward, was a schooner close hauled. As we approached, the privateer made sail and shot ahead, edging away. The greenhorns were puzzled at this, but "old Soundings" the rover, "guessed" he knew what she was about. Casting an eye to the southward, where the land lay broken into fragments, with numerous navigable channels between, it became obvious that his object was to dive into one of these. "Can't we send the boats after him?" "No doubt, but long before they could thread their way through these strange canals of Nature's own formation, he probably would be leagues at sea, on the other side to the eastward, and not at all improbable that before they got back, he would be seen dead to windward of the brig, hove to." So answered experience to the above query of a novice.

We ran under the sloop's stern, (a force-trader, belonging to Mother

Mann,) the skipper of which said he had not been boarded,* but that the scoooner was a heavy privateer. Passing on we stood for the latter under a press of sail, our hopes fluctuating as we skimmed along to the westward. About six in the evening our clever fugitive showed us his stern, having altered his course to the south, and at dusk ran in among the Cays, and was soon entirely lost to hope and sight. We were not quite near enough to hear, but there is no doubt of the usual salute having been wafted to us, as the cays shut us from the laughing eyes of Jack Spañola; "Buenas noches, señores."

We hauled up on the starboard, and got an offing by midnight, and then tacked to the south-eastward in quest of our cocoa-nut friend. There had been sufficient excitement during the chase to banish, for a time, all thoughts of the helpless schooner from the minds of all except Mizen, who having imbibed the reasonable and common-sense idea that he and two or three hands ought to have been left in her, and the prisoners removed, at least until the brig's return, could not shake her out of his head; for silver, if not gold, or both, he insisted she had. Was this a crotchet; "All in good time."

There was scarcely one on board but was restless and impatient to see the *dénouement* of the little play we had been performing; it was not strange, therefore, that cots and hammocks should be evacuated for the cool air of the deck. But Aurora's earliest blush, like the faint scintillations of hope's light, which began to dawn, (very unseasonably,) upon these betimes gents, was yet too undefined to meet their eager curiosity of seeing the naked truth, by the day-god's broad and clear illumination. The wind had nearly died away, the sails were flapping idly upon the masts, and the main-boom dipping occasionally into the spray hove up by the buttocks of the vessel as she performed her si-saw with the action of the ground swell, which is very prevalent upon this coast of Darien. There was, too, a considerable haze, and although the loom of the land could be distinguished, it was not yet late enough for the ready eyes to determine by the features of the coast, whether we had arrived near to the spot where "the prize" had been denuded of her plumage, and her heel unshod.

In a short time, however, the brig's position was declared by the master, to be very nearly the same as when we left the schooner, but not a speck appeared within the verge of the horizon. All eyes were strained in every direction to no purpose. "What can have become of him?" asked one. "It is quite impossible she could get away without sails, and her rudder was tripped," says another. "Was she leaky, Mizen?" cries a third: as if nothing but going to the bottom could account for her disappearance.

"Mañana! bueno, bueno," cries out the mate, recollecting the ominous whisper of the doubtful Spaniard. "What did he mean by that?" asked the master a little ruffled with his mate, for pretending to know better than himself, the true import of words. "What did he mean by that? Why, that he would he snug in Carthagena—*dollars* and all to be sure!" Old Soundings shook his head, and declared the thing appeared so mysterious that, he thought there must be magic in the affair!

* Had she been in possession of the enemy, she would have been a re-capture.

" Some Ariel sprite, with goblin spite,
Had sure been roving here,
Tho' the darksome night, no starry light
Bestow'd, to guide him there!
Why needs he light, to perform his right?
His Argus eyes are clear—
In woeful plight, with the current's might,
He wing'd *her* flight—in broad day-light,
Nor speck, nor trace was there."

" It was very odd—very odd indeed!" And this from those who had cut their *sapientæ dentes*. Now, in truth, it does appear "passing strange," that, we should have been, so soon again, the dupes of opinion, exonerating always our incomparable friend Mizen. In the name of good fortune, whose favors we certainly were not deserving of, by what infatuation was this vessel, a prize, left with all her crew on board, and no prize-master and men to take care of her until the brig's return? The precautions taken, will of course, be considered as a reply to that question; but, were these sufficient? "Opinion," said "certainly." Experience, however, proved clearly that it erred. That which seems mysterious under given circumstances, when the riddle becomes explained, may appear a mere simple matter of fact, and so it was in this case.

When we anchored off Carthagena under a flag of truce, one of the first persons met on the strand, was our friend Mañana, (as he was called by us,) the doubtful Spaniard. Who was he? The English prisoners for whom we came, told us as much of his history as they could gather. He had been the mate of an English brig called the Vigilant, formerly a man-of-war, captured from the French on this station, but sold out of the service; she was trading on the west coast of America, in the Pacific. The crew mutinied, killed, or hove the Captain overboard, took possession of the vessel, and carried her into Panama. I do not remember if this man, who was the chief mate, was implicated in the murder of the commander, but having formed connections among the Spaniards, he appears to have given up his allegiance to his own country: his name was mentioned, but I have forgotten it.

And now for the solution of the riddle. It appeared as the clear-headed Mizen had suspected, that the schooner had a large amount of specie on board as dunnage. A part, it was said, of the very same accumulation which we had allowed, with such John Bull simplicity, to slip through our fingers. "Well," perhaps the surprised reader will exclaim, after the details of these extraordinary examples of the consequences arising from allowing "opinion" to domineer over the dictates of plain common sense, "it is to be hoped, Master Toggle, you will give a redeeming specimen of the good effect which should be a consequence of such egregious folly." We will convey you, good sir, in a little time, to the Isla Fuerte; strong as was our want when the scene shifted, with hope of amendment, and where you will be enabled to judge for yourself. In the mean time, let us unriddle the riddle.

The fairy, sprite, or elf, or whatever the roving spirit was, (according to the imagination of "old Soundings") that unentangled the web into which the picaro Mañana had dropped, appeared to his perceptions in the shape of an old square-sail, which had been stowed away in the eyes of the schooner, and concealed, (not intentionally,) by the cocoa-nuts.

When the brig was sunk below the horizon, this was used to the best advantage; the rudder re-shipped with very little trouble, and sheets, pillow-cases, shirts, flags, &c., &c., sewed together and hoisted; which, with the aid of the easterly set, sent our craft merrily along towards her original destination: fortune, whimsical as she is, never deserting those who choose to profit by her whims, and by these simple means the schooner got safe into Carthagena. And thus whilst we, clever fellows, were hugging ourselves with the thought and expectation of grasping two prizes, —lost them both.

"The eye, that in its field two-fold objects sees,
And fain would grasp with eager hand:
Doth hope too much the anxious wish to please,
It follows but "a rope of sand"
That, grain by grain, drops from the strand."

And now for the third romance of real nautical life. The aforesaid Isla Fuerte is situated near the bight of Tolu, or Morrosquillo, nearly midway between Carthagena and the gulf of Darien. It is a small, low island, clothed from one extreme to the other with tall trees; and at the time we visited it, without inhabitants, at least of the *homo* genus. What brought us to this solitary, and as far as the eye could judge, most uninviting spot, I do not recollect; probably in search of water, or to cut wood, and catch fish, turtle, and guanoes; shoot parrots, curlews, and dap-divers; to pick samphire, wild celery, to palliate the serious scorbutic effect that might arise from a too continued corning of the tongue and its tonsils. Be that as it may, certain I am that the brig lay at anchor a very short distance off the shore, (western,) in 7 fathoms water, rocky bottom.

At the dawn of day, Mizen and self keeping the morning watch, masthead men were sent up to look round, if anything besides the birds were stirring. It was, indeed, not a very likely place to catch a stray "galloon," or anything vessel-shaped, except a fishing piraqua; but whether our friend Mizen, whom no disappointment could check from the exercise of his vigilance, thought it within the bounds of probability that the goddess who seemed to have taken an especial freak to throw chances in our way, was not yet sufficiently provoked by our wanton disregard of them, to punish us for our silliness; or concluded, as he always did in the most reasonable way in any case, that where there was a Spanish coast, there may perchance be a Spanish vessel; it never certainly struck me to enquire, being, to the best of my recollection, always fully satisfied with the correctness of his practical essays, to think of worrying him about his reasons for them.

But Mizen was both a gallant and a good seaman; on an enemy's coast in any part of the world, he knew that a thorough and keen cruiser would never slacken his vigilance, or allow his attention to be diverted from the main point of his instructions, whatever may have been the cause of his presence there. "To take, burn, sink and destroy," are the prominent words by which he is to be guided. If opportunity does not appear, he is nevertheless still to be on the alert, recollecting the possibility that "*Fortuna se inclinet*," and if it should not, at all events he will have the satisfaction of feeling that he has done his duty. Could *angels* have?

After enduring for a long time the vicissitudes attendant on a rover of the deep sea, it is truly delightful to drop in under shelter of the green trees of terra-firma, however circumscribed the dry land may be. It is a relief to be, even for a brief period, at rest; to stand upon the deck without inclination, to slumber without rocking, and in fact to feel and enjoy all, or any of the gratifications arising out of such a change. These were precisely the ideas that were floating at random in my half conscious sensorium, my sleepy eyelids being yet scarcely open, when the sun, the glorious sun rose majestically, throwing at once his side-long rays over the hitherto undefined and hazy scene, and displaying—what? "A sail, sir, standing out from under the land to the eastward." "Huzza! another chance. Toggle, my boy, start up, and see what you can make of her, whilst I rouse the captain."

On his return upon deck, the usual interrogatory "What is she?" was made. "She is a brig, and no doubt a Spaniard." By the time I reached the deck, the captain was there, "Well, what do you think of her, Toggle?" "She appears to be a Spanish trader, sir; certainly, by the whiteness, and cut of her sails, not one of our force traders." "The deuce take the force traders, they are always in our way," said the good tempered young captain, with a sort of forced smile, as a mantle to unpleasant recollections; then addressing himself to Mizen desired him to get all ready for waying. "Aye, aye, sir; but, I would lie still, and disguise the brig, until the stranger comes near enough to ensure our catching her." "I think so too, but let us be prepared for a start, if it should be necessary." I have already observed that our friend Mizen was on terms of intimacy with the captain, he, therefore, felt it a point of duty, to offer his mode of acting, upon any occasion, without reserve, being fully assured that his superior, who was, in every respect, a friendly kind hearted man, would not deem him presumptuous in thus freely expressing his sentiments unasked.

When the capstan-bars were shipped and swifted, and all ready for tripping the anchor, the mate renewed his advice. "Now, sir, if the boats were got ready on the off side, out of view, we should be doubly prepared to act vigorously." "Well, get them ready." This was speedily effected, and we had now nothing to do but wait patiently for the stranger's approach, which, on account of the wind being light, off the land, was necessarily tardy.

She had reached about half way between our position, and the main shore, apparently without seeing the brig, or, if she did, taking her for a merchantman, as she looked very like one, being rather rusty-coloured in her upper works, and painted with white boot-tops above the copper. At this time, unfortunately, the second-lieutenant stepped upon deck. The sequel will explain why I have said "unfortunately." This officer was a very fine young fellow, full of ardour and activity of body, upholding the renown, as far as courage and spotless integrity could do, of his enterprising and war-like ancestor. But whether from the thoughtlessness of youth, and consequent inexperience, or from the volatile buoyancy of his spirits, which would not allow his ideas to be consolidated by prudence or discretion, his opinions, and plans, during this extremely romantic and exciting cruize on the Spanish Main, seldom, if ever, proved correct; or were brought to a happy issue. He was a

smart officer, and a good seaman, and, as a gentleman, every thing that could be wished; in fact he required only experience to make him a valuable member of his profession.

Our young lieutenant immediately applied his glass to the stranger, examined her with apparent attention, and then made some remarks to the Captain: an "opinion" probably, that it was quite time the brig should be under canvas, for directly after the order was given "up anchor," a slight flush passed over the bronzed face of Mizen, and I believe the expression of amazement might have been seen in mine as well as his, as our eyes met; but he merely repeated the command given by the Captain, and went to his station forward, the first Lieutenant having appeared on deck. On passing him I said, laughing, "We shall have another naranjazo, I'll warrant ye!" "Mayhap something worse than that, my boy. They'll stick her in the mud, if they don't mind what they are about—" "And then we shall see something like Jackson in a clinch," responded I.

The brig was soon under sail, looking up obliquely across the track of the stranger. It is surprising what contrary ideas enter the heads of different persons when forming an opinion upon the best mode of effecting a purpose. The quality of judgment in all sane men of equal ability, one would suppose, could scarcely vary—yet, do we find it so? Here we see in a very plain common sense affair, antagonist opinion—and what is truly remarkable the umpire though agreeing in the first, yet following in the last and most hastily formed! It was an insignificant example it is true, but let us enlarge our view. Is it not a curious fact that the empowered critics, after the action of those who have performed—supposing they have failed— always profess to pass sentence perfectly unprejudiced, and without allowing the thought of precedent opinions to clog their judgment. Can the mind of man with the most willing desire to enter so solemn and onerous a task be perfectly free. Can it, we ask, consonant with his erring nature, be ever found upon such occasions, in so perfect a state of neutrality, so superlatively burnished and bright as not to shew one speck to mar the uniformity of its purity? Impressions are stamped upon the mind, following previous discussion, though not entered into by the party, spunge these with the will as much as you please, they will reappear and, however faint, mingle unconsciously with the judgment. Ask the physiologist, he will tell you it is quite impossible it can be otherwise. Well! we are not Angels nor Gods; it follows then, that a pronounced censure amounts to this and no more; the combined *judgment* of *half a dozen erring* men, condemns the *judgment* of *one erring* man! Balance the *amount* of *error* 6 to 1; Cocker will give the answer! The best we can expect is that, *intentional wrong* is never done. Is history a romance? God, it is to be hoped has forgiven those who passed sentence upon Admiral Byng. Can as much be expressed for those whose *will*, carried it into execution? And yet, if we mistake not, that very Article, imperative, unmitigating, savage, and inhuman, stands to this day unaltered! Look at Sir Robert Calder's case,—he, one of the most experienced efficient officers condemned for an error in judgment, upon a point where the whole responsibility rested with himself, and the intensity of that responsibility could only be conceived, not felt by his judges!

Place any single member among the arbiters of justice, in the place of the judged; and it becomes a problem whether he would not act precisely in the way the other did. But these are mighty cases, where the opinion to be formed does not emanate from the lookers on. In our paltry example, it was scarcely possible to have expected two opinions of the proper course to follow. The moment the stranger observed our brig under sail, she wore round, as if she had broached to, and braced up on the opposite tack. This evolution of the Spaniard must have convinced the young commander that Mizen's suggestion was the proper one to have followed. The wind was light, but the brig stole on through the still water, which at every cast of the lead grew greener and shallower; at last, the startling—"and a half three!" was responded to by the boatswain's "'Bout ship a-hoy." Round she went, and, as if both vessels had been connected by machinery, so did the other.

I think our vigilant friend Mizen felt how useles it would be to ask for a single boat and pursue the fugitive, or, with the idea of the brig's grounding, perhaps he may have thought that not even one could be spared. "Where's the Gunner?" "Here Sir."—"Give her a shot."—We were playing the boy's knowing trick of putting salt upon the bird's tail! The messenger was sent, but it fell at least a quarter of a mile too short. "Pshaw!" had scarcely issued along the line of the decks, when, "a quarter less three" signed the Spaniards release!—"That won't do Mr. Log?" said the captain to the master, and without waiting his reply, ordered the helm to be put down,—"'Bout she goes, keep her *west*." In the course of an hour, the Spaniard was out of sight, hid among the mangroves in some creek or river. Why we did not anchor again and send the boats after her, I do not know, but we were quite unacquainted with the coast within the bights; in those into which we ventured, the water was found to be shallow at some distance from the shore; and this part of the coast was out of the Master's beat when he was in the force-trade, or acting in the capacity of a licensed smuggler. Besides which, it may not be improper to state here with the candour and honesty which should ever attach to nautical narrative, that, the Spanish gunboats, and Guarda Costas of the whole line of coast from the Monges to Veragua, comprised between the 71st and 81st degrees of west longitude, but especially among the cays of San Bernardo, and the Isles of Rosario, had established for themselves a fame for being most expert gunners. To this fact, so honourable to the skill and practical eye of the Dons, I can safely testify, as I may perhaps by and bye relate.

To be continued.

Description of Lights on both sides of the British Channel.

(Concluded from p. 316.)

[In completing the paper of our correspondent Mr. McDougall, the first part of which appeared in our last number, we may assure the seaman who refers to these tables, that he may depend on the information

he will find there, having compared the positions given in it with those of the Admiralty, without relying on the secondary authority in those matters referred to by that gentleman. At the same time our thanks are due to him for pointing out the subject to us.]

FRENCH LIGHTS.

Names of Lights.	Latitude. North.			Longitude. East.			No. of Lt.	Color of Light.	Nature of Lights.	Height above H. W.	Description.
	°	′	″	°	′	″				feet.	
Calais	50	57	30	1	51	08	1	w	revol 1½ m.	125	lighthouse
Do., Fort Rouge							1	w	fixed	33	tide lights
Cape Grisnez	50	52	10	1	35	09	1	w	revol. ½ m.	194	lighthouse
Boulogne	50	43	56	1	35	18	2	r	fixed	43	tide lights
Ayprock Point	50	41	57	1	33	54	1	r	inter. 2 m.	154	lighthouse
Staples { Lornet,	50	53	38	1	34	42	1		fixed	52	,,
Bay { Conquet	50	32	43	1	35	44	2		,,	52	,,
Point Berck	50	24	00	1	33	44	1		,,	66	,,
Calvados	50	11	42	1	30	54	1		inter. 4 m.	92	,,
Treport	50	[illegible]	53	[illegible]	22	21	[illegible]		fixed	26	tide light
Dieppe W. Mole	49	56	[illegible]	[illegible]	5	10	2		,,	39	1 a tide light
Ailly	49	55	37	1	37	42	[illegible]		revol. 30 s.	305	lighthouse
St. Valery en Caux	49	52	28	0	42	42	[illegible]		fixed	30	tide light
Fecamp	49	46	36	0	22	29	[illegible]		,,	427	lighthouse
Fecamp harbour	49	46	37	0	22	03	1		inter 3 m.	39	tide light
Cape la Heve	49	29	43	0	4	15	2		fixed	446	
Havre	49	29	30	0	6	17	1		,,	39	
Touques	49	[illegible]	12	0	4	57	2		,,	20	
										33	
				West							
L'Oive Reef	49	[illegible]	37	0	14	46	[illegible]	white.	fixed	39	
	49	[illegible]	37	0	15	[illegible]	[illegible]		,,	92	
Ouistreham	49	[illegible]	[illegible]	0	[illegible]	20	[illegible]		,,	30	
Pierre de Lin	49	20	28	[illegible]	[illegible]	[illegible]	[illegible]		inter. 4 m.	138	
Pierre à Quesnel	49	[illegible]	[illegible]	[illegible]	45	[illegible]	[illegible]		fixed	33	
Grandcamp	49	28	20	[illegible]	[illegible]	[illegible]	[illegible]		,,	269	
St. Marcouf	49	[illegible]	20	[illegible]	[illegible]	48	[illegible]		,,	56	
La Hougue	49	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		,,	36	
Barfleur	49	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		,,	282	
Pierres Noires	49	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	2		,,	33	
Cape Barfleur	49	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		inter. ½ m	236	lighthouses.
Pierres Noires à Nord	49	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		fixed	85	
[illegible] Rock	49	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		inter. 3 m	69	
Querqueville	49	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		fixed	59	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		,,	33	
[illegible] Cape	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		,,	157	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		revol. ½ m.	262	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		fixed	154	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		,,	26	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		revol. 2½m	246	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		,, 15s.	81	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		fixed	40	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		,,	148	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		inter. 3 m.	167	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		revol. 1 m.	223	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		fixed	272	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		revol. 30s.	177	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		inter. 4 m.	148	

[illegible] between Havre and Touques are purposely

ENGLISH LIGHTS.

Name of Light.	Latitude. North.			Longitude. East.			No of Lt.	Colr. of Light	Nature of Lights.	Height above H. W.	Description.
	°	′	″	°	′	″				feet.	
South Sand Head	51	10	00	1	27	00	1	r	fixed	38	light vessel
South Foreland	51	8	00	1	22	00	2	w	"	380 275	light house "
Dover	51	7	00	1	18	00	3	w	"	60 12	tide lights
Folkestone	51	5	00	1	11	00	1	r	"		tide light
Dungeness	50	55	00	0	57	48	1	r	"	92	lighthouse
Rye Harbour	50	57	00	0	45	00	2	w	"	36 26	tide lights
Hastings	50	52	00	0	36	00	2	—	"	60 30	Mar. to Sep
Beachy Head	50	44	00	0	13	00	1	w	revol. 2 m.	285	lighthouse
Newhaven	50	47	00	0	3	00	2	—	fixed	23 11	Sep to May
					West.						
Brighton Pier	50	50	00	0	9	00	1	—	"	35	"
Shoreham	50	50	00	0	15	00	2	w	"	42 23	tide light
Owers	50	41	0	0	39	00	1	r	"	26	light vessel
Nab	50	42	00	1	2	00	2	r	"		
St. Catherines	50	36	00	1	18	00	1	st.	"	178	"
Calshot	50	48	00	1	16	00	1	—	revol. 1 m.		
Needles	50	39	53	1	33	55	1	w	fixed	469	lighthouse
Hurst	50	42	23	1	32	50	2	r	"	66 29	light vessel
Portland	50	31	22	2	26	49	2	w	"	198 131	lighthouse "
Brixham	50	24	00	3	30	00	1	—	"	20	"
Dartmouth	50	20	00	3	33	00	1	—	"	49	"
Start Point	50	13	22	3	37	43	1	w	inter. 1 m.	204	"
Plymouth Breakwater	50	20	00	4	9	00	2	—	fixed	13	"
Eddystone	50	10	54	4	15	03	1	w	"	72	"
St. Anthony Point	50	9	00	5	00	00	1	w	inter. 1 m.	65	"
Lizard	49	57	18	5	10	39	2	w	"	221 224	" tide light
Penzance	50	7	00	5	31	00	1	w	fixed	29	lighthouse
Longships	50	4	00	5	44	00	1	w	"	88	light vessel
Seven Stones	50	2	00	6	7	00	2	r	"	20 38	lighthouse
St. Agnes, Scilly	49	53	37	6	19	23	1	w	revol. 1 m.	138	

NOTICE OF THE CITY AND COMMERCE OF SHANGHAI.

THE city of Shanghai is situated about fourteen miles from the sea, and on the right bank of a river of the same name, which flows into the Yang-tsze-keang at a small distance from its mouth. Ships of the largest size can ascend the river and anchor in front of the city, although a pilot is indispensable, and it is difficult to avoid getting on shore sometimes. Captains experienced in these seas say notwithstanding that the approach and entry of the river present no less difficulty.

The city has a rampart or wall with a circuit of five or six miles. It has many embrasures where cannon might be pointed, but it is so narrow in some places that it would be impossible to manage artillery on carriages. The wall is without bastions, exterior defences, and ditches. The houses of the suburbs besides, which form whole wards on some sides are built close to it. It has five entrances, each consisting of two gates, but without drawbridge or other defence. The streets are narrow, and filthy to a degree difficult to be imagined. Shops of all kinds are numerous, or, to speak more correctly, every door is a shop. The city contains at least 300,000 souls. Along the river the houses are washed by the water.

Shanghai is truly the port of the city of Su-chau which is about 150 miles distant by the river. Su-chau is considered by the Chinese as the paradise of their country. Those who have succeeded to an inheritance, those who have obtained sudden riches, in a word, those who wish to spend some thousand dollars merrily betake themselves to Su-chau. Here are found the best hotels, the pleasure boats most sumptuous, the most pleasant gardens, and the fairest ladies. The fashions for the dresses and *coiffure* of the fair sex change in China every three years, and these fashions proceed from Su-chau, and give the laws even to the ladies of the court. The circumstance of being so near this city and the mouth of the Yang-tze-keang has made Shanghai a mercantile emporium. The Yang-tze-keang is a river that washes the walls of Nankin and of several other provincial capitals, without reckoning an immense number of inferior cities, as it is navigable for large vessels for more than a thousand leagues into the interior. Indeed the navigation of this vast river is of the greatest amount. In it there are several ports of the greatest resort. In that of Hankon, province of Hukwang and situated 600 leagues from the sea are found continually assembled from six to eight thousand vessels. The river besides receives a vast number of tributaries all more or less navigable, and its mouth as already mentioned is contiguous to Shanghai.

The vessels which arrive at that port are known at the custom-house as those of the north, of Fokien, and of Canton.

The vessels of the north come principally from Quantung, Leatong, and Teinsin at the mouth of the Pei-ho, the river which passes Peking, and from the province of Shantung.

The vessels of Quantung and Leatong are the same as those of Teinsin. Those of Shantung proceed from the different ports of that province. Both are known under the name of vessels of the north; and all that come to Shanghai annually at the commencement of the north-east monsoon amount to about 900.

From Fukien about 300 come annually, but a great part of them come from Hai-nan or Formosa, and some from Chusan and Ningpo, also from Manila, Bali, and other ports prohibited to the Chinese.

About 400 come from Canton, but a great part proceed from Macao, Singapore, Pinang, Jolo, Sumatra, Siam, and other places prohibited to the Chinese.

The vessels therefore of the outer sea, which come to Shanghai annually are 1600, although in some favourable years they have amounted to 1800. Taking these vessels at an average of 200 tons, we shall have an

importation of 800,000 tons. Although the vessels of the north are 900, and those of the south only 700, these latter have a greater total amount, among the former are many of 60 tons.

The vessels of the north bring a great quantity of a dry paste known under the name of Tanping, the residuum or husk of a leguminous plant called Teuss, from which the Chinese extract oil, and which is used, after being pressed, for manure to the ground; a great quantity also of the same plant unpressed, hams and salted meat, oil, wine and spirits, timber for ship building, wheat, chesnuts, pears, fruits and greens.

From Fukien they bring sugar, indigo, liquid and dried, sweet potatoes, salted fish, paper, black tea, soap.

From Canton sugar, cinnamon, Canton cloth, fruits, glass and crystal, perfumes, soap, white lead, &c.

(*To be continued.*)

The New Slave-Trade Convention.

The following is the text of this Convention, the principal provisions of which were made known in our last number.

"His Majesty the King of the French, and Her Majesty the Queen of Great Britain and Ireland.

"Considering that the convention of the 30th of November, 1831, and the 22nd of March, 1833, have attained their object in preventing the slave-trade under French and English flags; but that this odious traffic yet subsists, and that the said conventions are insufficient to assure its complete suppression;

"His Majesty the King of the French having testified his desire to adopt more efficacious measures, and Her Majesty the Queen of Great Britain having equally at heart to concur in this design,

"They have resolved to conclude a new convention, which shall be substituted in the place and stead of said conventions of 1831 and 1833.

"And to this effect have named (here names), who after having exchanged full powers, have agreed upon the following articles:—

Art. 1.—"In order that the flag of his Majesty the King of the French, and of her Majesty the Queen of Great Britain, may not be usurped contrary to the right of nations, and to the laws of the two countries to cover the slave-trade; and in order to provide more efficaciously for the suppression of this traffic—

"His Majesty the King of the French engages to establish within the shortest possible period upon the western coast of Africa, from the Green Cape (Cape Vert) to the 16° 30′ of meridional latitude, a naval force composed at least of 26 cruisers, as well sailing as steam (*tant a voile qu'a vapeur.*)

"And her Majesty the Queen of Great Britain engages to establish, with the shortest possible delay, upon the same part of the coast of Africa, a force composed of at least 26 cruisers, steam and sail, and upon the western coast of Africa a sufficient number of cruisers to suppress sufficiently the slave-trade.

"Which cruisers shall be employed for the purpose above indicated, conformably to the following dispositions:—

2.—"The said French and English naval forces shall act in concert for the suppression of the slave-trade.

" They shall commence their operations by establishing an exact surveillance upon all the part of the western coast of Africa comprised in the first article; in particular upon all the points where the slave-trade is carried on.

" They shall, with this view, exercise full and completely all the powers of which the crown of France, and that of England, are now in possession, except the restriction introduced by the present convention, so far as regards French and English ships.

3.—" The officers in the service of his Majesty the King of the French, and the officers of her Majesty the Queen of Great Britain, who shall be respectively charged with the command of the squadron destined to assure the execution of the present convention, shall agree upon the best means of exercising the said surveillance in choosing and designating the places of station, and in confiding these posts to cruisers of the two nations acting together or separately, according as it shall be judged convenient (*convenable*). In such wise, nevertheless, that in the case when one of those posts shall be exclusively confided to the cruisers of these nations, the cruisers of other nations may come there at all times to exercise the rights which belong to them.

4.—" Treaties for the suppression of the slave-trade will be negociated with all the native princes and chiefs of the above-named coast of Africa, according as it shall appear necessary to the commanders of the French and English stations.

" These treaties will be negotiated either by commanders themselves, or by officers to whom they will give instructions to this effect.

5.—" The treaties abovementioned shall not have any other object than the repressson of the slave-trade. If one of the said treaties be concluded separately, by an officer of the British marine, the choice (*faculte*) of acceding to it shall be reserved to his Majesty the King of the French; the same choice shall be reserved to her Majesty the Queen of Great Britain in all the treaties which shall be concluded by an officer of the French Marine. In this case, where his Majesty the King of the French and her Majesty the Queen of Great Britain will both become parties in the conclusion of the said treaties, the requisite expenses for presents and similar costs shall be supported by both nations.

6.—" In cases where for the execution of the said treaties, and in conformity to the law of nations, the employment of force by land or by sea shall become necessary, neither of the contracting parties shall have recourse thereto without the consent and concurrence of the other.

7.—" The moment the squadron of his Majesty the King of the French shall be ready to commence operations upon the coast of Africa, the King of the French will notify it to the Queen of Great Britain, and the two contracting parties will make known by a public declaration that the present convention is upon the point of being put into execution.

" The said declaration will be expedited whenever it will be necessary (*ou devoir servir.*)

" In the three following months the right of mutual search established by the conventions of 1831 and 1833, shall cease to be exercised, and the commissioners' mandates delivered to the cruisers of both nations shall respectively be retained (*restituées*).

8.—" Seeing that experience has proved that the slave-trade to those parts, where it is habitually exercised is often accompanied by deeds of a dangerous nature for the tranquillity of the seas and the safety of the flag.

" And considering at the same time that if the flag borne by a ship is *prima facie* the sign of nationality of the ship, this presumption will not be regarded as sufficient to prevent in all cases proceeding to its verification, because it would expose all flags to dishonouring abuses in making them to cover piracy, the slave-trade, and all other illicit traffic.

In order to prevent all difficulty in the execution of the present convention, it is understood that instructions, founded upon the law of nations and

upon the constant practice of maritime powers, shall be addressed to the commanders of squadrons and cruisers upon the coast of Africa. The two governments have, in consequence, communicated to each other the text of the said instructions, which are annexed to the present convention.

9.—"His Majesty the King of the French and her Majesty the Queen of Great Britain engage themselves reciprocally to interdict all slave-trade in the colonies that they possess, or shall in future possess, and to prevent by all means in their power their subjects from using their flag for carrying on the slave-trade with foreign nations, or to engage in any way in the said slave-trade.

10.—"Six months after the declaration mentioned in Art. 7, the present convention shall enter upon course of execution. It is concluded for ten years. The anterior convention shall be suspended. In the course of the fifth year the high contracting powers shall concert anew, and will decide according to circumstances, if it be suitable, either to put again in execution all or part of such conventions; whether to modify or abrogate all or part of the new convention. At the end of the tenth year, if the anterior conventions have not been again in execution, they shall be considered as abrogated (*a la fin de la dixieme annee si les convocations anterieures n'ont pas ete remises en vigeur elles seront consideres comme abrogees*). The two high contracting parties engage besides to continue an understanding for assuring the suppression of the slave-trade by all such means as shall appear to them the most useful and efficacious, until the moment when this traffic shall have been completely abolished."

The convention is signed by the Earl of Aberdeen, the Duke de Broglie, the Count de St. Aulaire, and Dr. Lushington.

The Bombay Observatory.

The following account of the Bombay Observatory, of whose very existence we suspect the greatest proportion of our readers have till of late been in ignorance, is extracted from the *Bombay Courier Almanac* for 1845; it will probably be found of interest:—

The Observatory is close to the lighthouse, and separated from the compound of the latter by a slight fence. The Observatory has been greatly improved since its institution by the addition to the building of a Lecture room, in which scientific Lectures are given weekly, to the junior officers of the Navy, and open to the public free. For this valuable addition, and various important improvements in the general arrangement of the establishment, the merit is due to George Buist, L.L.D., who is in charge of the Observatory, and delivers the Lectures, accompanying his remarks by experiments and demonstrations. Both duties are performed cheerfully and efficiently without cost to the Government. The Lectures owe their origin to some remarks made by Mr. Jenkins and the officers under his charge at the Observatory. Government caused a Lecture room to be constructed, and ordered a sufficiency of apparatus to be supplied. The regular course, it was proposed to commence on Wednesday, the 2nd of October, and close on the 14th of December 1844, beginning at 5 P.M. on the Wednesdays, and 5 P.M. on Saturdays, and to be repeated, with such alterations as were considered expedient, three times a year; the third term ending in May. Chemistry was designed to form the subject of the Wednesday, and Natural Philosophy of the Saturday Lectures. Natural History, with the application of science to the arts, form the subject for Wednesday and Saturday at the conclusion of the course.

The Observatory consists of two well fitted up buildings for the separate purposes of Astronomical, Magnetic, and Meteorological observation. The Astronomical Observatory was erected ten or fifteen years since, and placed in charge of Mr. Curnin, now of the Calcutta Mint. It was rather indifferently supplied with instruments from the first, and the best of them were subsequently withdrawn. Those presently in use are a three feet transit telescope, by which the transits of from two to six stars are taken every evening; an Altitude and Azimuth Circle; an Astronomical Clock; and a couple of Refracting Telescopes. A self registering rain and wind guage, on Mr. Osther's principle, belonging to the Meteorological department, is in use at the Astronomical observatory. The work performed chiefly relates to the rating of the Chronometers of the Indian Navy, of which there are generally from five to fifteen in charge; and giving time to the shipping in the port. This last is effected by two different plans so as to afford as much accommodation as possible to ship Captains, the flash of gun-fire is observed, and its error noted and published in the newspapers, and also written out and hung up daily in the Master-Attendant's Office and Commercial Reading Rooms. To correct a watch on board ship by this, it is only necessary that the gun-fire should be observed, and its error noted by the chronometer on board; the following will give the result.

Time of gun-fire as seen from the Observatory noted by a chronometer for true time say 8h. 59m. 5s. Time of gun-fire as noted from on board by ship's chronometer, say 9h. 1m. 2s. This gives error of gun-fire 0h. 0m. 55s.: error of ship's chronometer 0h. 1m. 57s. The other method of giving time to the shipping is by a board three feet square, hoisted to the top of a tall spar, seen from the harbour over the cupola of the Observatory; it is dropped at one o'clock Bombay mean time. Dr. Buist is at present in charge of the establishment, with one permanent and one occasional native assistant, the latter being chiefly employed in the other department of the Observatory. The Superintendent resides under the same roof, about two-thirds of the building being occupied as a dwelling-house, one-third as observatory or office;—the appointment is unsalaried, and at present only held provisionally.

The Magnetic and Meteorological Observatory occupies a different building within the compound: it is, like the other Observatory, under charge of Dr. Buist. It was erected in 1840, and first put in operation in November 1841. The original assistants were non-commissioned officers of the Sappers and Miners Corps. Two of these having, in the absence of Mr. Orlebar on a tour of inspection, misconducted themselves, the regular observations in the shape prescribed by the Royal Society were for a time interrupted. Three native assistants having been sanctioned on the 28th August, 1842, operations were resumed on the 1st September, and have since then been conducted regularly. The instruments for magnetic purposes are a horizontal and vertical force magnetometer, with a horizontal and vertical declinometers; these are read hourly day and night. The dipping needle (Major Sabine's instrument,) for determining magnetic intensity, is registered at stated periods. The meteorological instruments consist of a large standard barometer by Newman, with a tube of half an inch diameter; simpiesometer by Adie; wet and dry bulb thermometers; maximum and minimum self-registering thermometers; for solar and terrestrial radiation, and for standard reference and for the purpose of experiment. An actinometer, and a hygrometer by Daniell, are read at stated periods. Two rain guages on the open ground, with a self-registering tube, are used during the wet season.

The whole of these instruments are read hourly day and night. Between the hours of 2 and 4, and 8 and 10 A.M. and P.M., the barometer and simpiesometer are read every ten minutes. The number of readings registered daily amount to above 280; besides about half as many occasional readings, all of which are afterwards corrected, tabled, and lithographed at the observatory by the assistants. These consist of one European non-

commissioned officer, three constant and one occasional native observers. The instruments were intended for an observatory proposed to have been erected at Aden, which is nearly under the magnetic equator. They were transferred to Bombay, which is within eleven minutes of the meridian of no variation. The institution is one of 51 now in operation on the same plan in various quarters of the globe. Of these there are six in India, viz. at Simla, Madras, Singapore, Trevandrum, Lucknow, and Colaba. To these as well as to the Royal Society of London, to the Government of Bombay, the Royal Asiatic Society of Calcutta, the Bombay Branch of the Royal Asiatic Society, and to Mr. Piddington, Curator of the Museum of Economic Geology of the Museum of Calcutta, copies of the reports of the Observatory are forwarded every month by order of Government."

Till 1841 there was no means of affording a correction for chronometers accessible to the public at Bombay. Since then, the following methods have been adopted. The flash of the gun fired from the saluting battery at nine o'clock in the evening, is watched from the Observatory, and its error noted. The correction is hung up next morning at the Master-Attendant's office, and published, besides, in all the local newspapers. An officer on board-ship has only to observe the flash, and note the error by his chronometer, when a comparison of the two will give true time. In addition to this, gun-fire has now begun to be telegraphed from the flag-staff of the Observatory, for the convenience of ships just leaving the port.

The first distinguishing pendant is placed at the top of the flag-staff when the gun is slow, the second when it is fast, of true time; and the amount of error is denoted by numeral flags indicating seconds—three of these giving 999 seconds, or 16m. 39s. a very much greater error than can ever occur. For anything less than a minute and a half two numeral flags are sufficient. The flags are run up at 8 A.M., and kept flying till noon, so that every opportunity is afforded to the community at large, or to the officers who may not be on shore, to see the return of the correction for gun-fire. Besides this, a board is dropped at 1 P.M.; and, as the construction of this is somewhat different from that of most others we have seen described, a short account of it may be of interest.

The Observatory, it must be premised, is very nearly three miles from the roadstead, so that the time-board requires to be made large and conspicuous to be of service. The mast is forty-five feet high, kept steady by means of strong iron stays. Guide rods are placed on each side of it at the distance of eighteen inches from each other. On these there are four strong iron eyes, by which the drop board is bolted. This consists of a teak frame 3 ft. by 4, covered with stout canvas painted black. It is pulled up by a haul-yard passing over a sheave at the top of the mast, and held in its place when there by a slot bolt. In stormy weather it is fastened by a couple of thick ropes, and these keep it fast; but being slackened the moment the bolt is withdrawn, afford no impediment to the descent of the board. The total fall of the board is 16 feet, and to prevent the concussion which would otherwise take place, a heavy chain, ten feet long, with a weight at the end of it, more than sufficient to counterpoise the board, is made fast to the end of the haul-yard. The board first descends six feet free and unimpeded; it then begins to draw out the chain, and to become retarded, in consequence, in its descent, till its whole motion is destroyed, and it comes gently to rest. Of course time is noted from the first instant of the board's descent.

With so large a structure as this, so apt to be shaken by the wind, a bolt of considerable size was requisite; this at first was pulled directly by the assistant standing by the clock—a change of motion from a perpendicular to a horizontal direction being effected by a bell crank lever. The amount of pull required being in this way found liable to interfere with the precision of the drop, the following alteration, which has been found extremely convenient, was adopted. The lanyard for pulling the bolt was made fast to a lever

near its extremity; to the end of this a heavy weight was suspended, and at the other end it was fitted with a trigger like a gun-lock; to this last the string to be pulled by was made fast, so that by the slightest jerk the catch was withdrawn, the weight disengaged, and made to operate instantly on the main lanyard, by which the catch bolt at the top of the mast was pulled and the board let go. This was found to be easily fitted up, not liable to get out of order, and eminently serviceable and simple in every way.

During the south-west monsoon, when the sky is often hid for days together, a blue flag is hung out when the time has been interpolated, not observed;—when any error exceeding one-fourth of a second is made in dropping the board, a red flag is hoisted, and the time given at two o'clock.

The chronometers belonging to the Indian Navy are kept and rated at the Observatory.

Nautical Notices.

Singapore, *May 13th*, 1844.—Sir,—According to promise, I herewith send you a little more information respecting Allas Straits. There no doubt are a few Commanders acquainted with the same, but as I have never seen or heard of any such information having been published, I take the liberty of inserting it for the benefit of Commanders, intending to pass through the above mentioned Straits.

If intending to enter the Straits from the northward in the south-east monsoon and finding any difficulty in getting round the Twin Islands, (as at some time of the year there are strong currents running to the westward with light variable airs of wind,) a good anchorage can be obtained on a detached coral bank about three miles to the north-west of the Twins, where the barque Bangalore and the Brothers anchored on the 31st December, 1843. The Bangalore had 6 fathoms, and the Brothers was about ¼ of a mile in shore of the Bangalore in 7 fathoms water, with the peak of Lombok S.W. b.W. southerly, centre of Twins S.E.b.S. ½ S. When the extreme of Twins in one bearing S.E.b.S. and Lombok peak S.W.b.W., then over falls 11, 8, 9, fathoms; the Twins well open from Lombok, and peak the same bearings, no bottom with 25 fathoms of line. About three-quarters of a mile off the Lombok shore there are soundings, 12 fathoms, and a good and safe channel between the Twins and Lombok with regular soundings, 11, 15, and 16 fathoms in mid-channel. I have come and gone through that channel eight times, both with beating winds, and have taken on board cargo from the small village called Sugian inside of the Twins, where there is good anchorage from 8 to 12 fathoms, also stock, water and wood can be procured. In going through the Straits keep a good quarter of a mile off from either side. A man at the mast-head can see all the dangers that are on either side. After passing through Sugian Straits, the best passage is between the rocky island and Lombok, as anchorage is always obtainable, when winds and currents will not permit sailing.

There is another detached coral bank (which I have passed twice over,) with least water 6 fathoms the bottom quite clear to be seen, with the sand bank island off Lombok town (erroneously called Segara) N.b.W. ¼ W., about two miles distant, and the round hill on Lombok beach and a very conspicuous green hill inland in one W.b.N. ¾ N. There are twenty fathoms water between it and the shore. The British barque Rachel, Captain Scott, anchored on this bank, after being three months from Sourabaya bound to Europe. On the 25th of December, they were off Allas Straits, (he was afraid of keeping near the Twins, supposing there was no anchorage,) they found strong currents setting to the northward and no wind, no bottom to anchor on, the consequence was that they were taken (by the current) brough between Kangelang and the other islands there, and drifted until

they sighted the Borneo shore, and then anchored until a breeze came; they arrived again in Allas Straits on the 13th of February. If he had known of the Coral bank being off the Twins, or a passage between the Twins and Lombok, it would have saved him two months on his passage.

Hong-Kong Gazette, 4th June, 1844. W. C. LEISK.

HYDROGRAPHICAL REMARKS AND POSITIONS.—*By Captain Sir Edward Belcher, C.B., commanding H.M. surveying ship Samarang.*

Cape Rivers Point is a rocky and long sandy bay, fronted by a coral ledge at low water extending to its northern angle, both these points from River Peak northerly, a low rocky island, connected by a coral flat with the Main, between which and Cape or Point Rivers the coast recedes considerably.

The islets off this Cape are connected by a coral ledge, nearly dry at low water; within this and the Cape is a channel with from 18 to 20 fathoms, the coast running back into deep retired bays, with two large villages. The two islets off this Cape are very remarkable, one being tufted with trees and perpendicular to seaward, the other about half its height, and white with the slime of sea-birds. The latter I have named Slime Island. For positions, see the following table.

BORNEO.—A rock nearly awash lies N. 11° E. 3½ miles from Tanjong Sepang. The rock marked awash or covered at high water, to the southward of the Island of St. Picire two miles, is always above water, and vessels should not at night pass nearer than four miles to those islands without seeing that rock before dark; the passage between it and the island is safe; no passage between the islands.

The reefs off Tanjong Apee extend about three miles, and vessels passing would do well to keep a respectable distance; merely making out the sandy beach from the deck. Vessels wishing to water may anchor in a very convenient berth in 6 or 8 fathoms, about north of the Cape, which is low land, capped by a small Hummock a mile inland. The best landing is just to the southward of the northern reef, or between them in the first bay, where two ponds (continually filtering) will be found; that to the southward is very pure and clear water, filtered from the other, which is much stained with leaves and decayed vegetable matter. The Samarang, watered by hoses. Trees (adapted for spars or plank), will be found a short distance inland.

A Shoal is reported between the Acasta rock and Victory Island.

PLACES.	LAT. N.	LONG. E.	VAR.
	° ′ ″	° ′ ″	° ′ ″
Panagatan	11 50 56 N.	121 18 55 14	0 15 30 E.
Samboangan . . .	6 54 55 5 N.	122 5 13 4	1 19 41 E.
Iolo W. Pt. Bay . .	6 3 11 4	121 0 41 9	0 33 38 E.
Sooladdie	5 51 23 N.	120 49 29 2	0 49 58
Samarang Island . .	5 28 30	120 15 30 7	0 44 21
Unsang	5 17 17 5	119 15 37 4	0 53 10
Cape Rivers	1 20 24	120 45 16 4	1 1 0
Manado Tona . . .	1 39 48 7	124 38 46 4	0 5 22
Manado Observatory .	1 30 22 7	124 46 49 0	1 1 56
Banca S.W. 3rd . .	1 46 24	125 3 15 8	1 7 24
Meyo Island . . .	1 21 4 5	126 20 16	0 18 13
South Station . .	1 16 7 5	126 20 30	Same Nearly.
Teanate Wt. Tang . .	0 44 6 N.	127 14 32	" "
Pirato Island	0 22 42	127 31 37	" "

PRINCE OF WALES BANK.—At noon in lat. 7° 38' N., long. 110° 38' E., determined to continue a S.S.W. course and endeavour to pass over the Prince of Wales Bank; got several casts of the lead, between 7 A.M. and daylight of the 27th, but no bottom. At 7 A.M. steering S.S.W. with a light breeze, clear horizon, observed rocks and coral alongside: sounded in nineteen fathoms, and continued sounding till 10h. 30m. A.M. in irregular soundings from 5 to less seven to fifteen fathoms, then no bottom. Steering S.S.W. about three miles per hour. Did not observe any discoloured water on any part, and made no doubt of this being the Prince of Wales Bank, which the latitude at noon and sights taken when on the bank at 9h. 30m. A.M. proved, placing us in 4° 5' N., and 110° 27' 30" E. at time of sights, by two watches agreeing in a run of twelve days from Macao.

April 27th 1844. lat. 7° 38' N., long. 110° 25' E., steering S.S.W. three miles per hour. At 2 P.M. was surprised at observing rocks, and coral again, under the bottom: sounded in ten fathoms, continued steering S.S.W., and held irregular soundings from half less 7 to 13 fathoms up till 4 P.M. then no ground. This I am confident is a distinct bank from the Prince of Wales, and apparently of large extent: took sights when on the bank at 3h. 30m. P.M. and from which and the latitude at noon, I should place this bank in 7° 42' N., and 110° 21' E. The day was perfectly clear and the sights taken with care. This bank may sometimes be taken for the Prince of Wales Bank, but having passed over and sounded on both, I am sure of their existence.

(Signed) GEORGE GRAVESEN,
April 30th 1844. *Commander of Anne Ellen.*

JOHANNA REEF.—The barque Johanna from Samarang, bound to Singapore, struck on a reef to the south-east of the Rabbit and Coney.

At the time of the accident the vessel was fully three miles from the opposite shore. The shoal is marked in Horsburgh's new chart, corrected up to 1841, about three-quarters of a mile off the shore. The Johanna, we are informed, was going a direct course by N.E. ½ N. to St. John's Point, at the rate of six knots when she was caught in a squall, and whilst in the act of reducing sail struck. Every endeavour was made to get her off by laying the bower anchor astern, and a 7-inch hawser bent to it, at the same time heaving upon it as much as it would bear, as well as to lighten her forwards by throwing rice overboard, but as the tide was perceived to be falling at the time, it was found impossible to get the vessel off that tide. The spars were then sent down to lighten her aloft, and as the tide fell the vessel gradually took the reef with her bilge, and at low water she had three feet under the bow, and five feet under the stern at 6h. P.M., and at 8h. 30m. P.M., the tide having flowed so rapidly, she floated off the reef.

At 2h. A.M. on Sunday morning the vessel anchored off a little below Tanjong Rue, making no more water than she did before she struck. This statement is merely given for a guide to other navigators who may come the same way. As the shoal lies fully three miles off, as already stated, and the distance between the Rabbit and Coney, and the opposite shore being about nine miles, Horsburgh's new chart up to 1841 is of no use as a guide to avoid the shoal, which consists of soft coral.

The spot the vessel struck upon was detached from the part which appeared above water at half tide: between this and the detached spot there was a passage of deep water about two breadths of a ship, and from all appearances there is no safe passage between this spot and the opposite shore, as reefs appeared far inside at low water.—*Singapore Free Press.*

PORT WILLIAM.—*Falkland Island.*

The general information of masters and owners of vessels trading Horn, I must request you to publish the following account of

Port William, on the south-eastern extreme of the East Falkland Island; as I think the value of it, as a port of call, is at present very imperfectly known.

The harbour is so situated on the point of the island that it is almost impossible to put a vessel in an unsafe position, should the wind prevent a stranger entering the port at night. The dangers on this part of the coast are few near the land, and, with one or two exceptions above water. Of these I have no occasion to speak, as there are good charts published. A master having no chart need not hesitate, being careful, but not to approach the coast nearer than 2½ miles in the night. In daylight the Kelp will indicate any danger with the exception of the Volunteer Rock, off the north head of Berkeley Sound. These remarks apply to the coast from the Sea Lion Isles to Berkeley Sound.

Pilots are not required; as any one using common care may take a vessel in and out, day or night, without the slightest danger, it being one of the easiest and safest harbours I have ever entered. There are two harbours—Port Stanley (the inner) and Port William (the outer). A vessel calling for supplies has no occasion to enter the inner harbour, the entrance to which is deep but narrow, as you can bring up in from seven to nine fathoms, and be landlocked in the outer.

Three-fourths of the year the winds prevail out of the harbour, which lies nearly W.S.W., and the distance to beat up is not more than four miles, with plenty of room.

Supplies.—Beef is now charged 2d. per lb.; as soon as demand increases it will not be more than half that price. The cattle are now estimated at more than 100,000 head, of good quality, and cure well. Water is easily obtained at present; but Governor Moody, aware of the importance of despatch is about building a floating tank, that will supply any quantity in twelve hours. It keeps well. The supply of small stores is at present bad and expensive; this will alter of itself when the demand increases. No fire-wood to be had, but plenty of peat for fuel. Game is very abundant—rabbits, geese, ducks, snipes, and a variety of water-fowl; in one day you can obtain a good sea stock. There are no vegetables at present, owing to the settlement having been recently moved from Berkeley Sound; but there is no doubt they will be plentiful in time. Succas grass, you can obtain in any quantity; it is excellent food for stock, and will keep a fortnight. In case of sickness or accident on board a vessel, there is a government surgeon. For a ship requiring repairs, the inner harbour is excellent, deep water alongside, and good landing for cargo. At the present time there are no shipwrights, and very little timber is to be had; so that it would not be advisable for a vessel requiring much repair to touch at this place, but any ordinary accident might be made good.

There are no harbour dues, pilotage, or Custom forms to create delay, expense, or trouble; and from what I did, I can confidently assert that any vessel may get the supplies she wants, and be to sea again in 48 hours. When this is compared with the expense, trouble, detention for water, and deviation from the route occasioned by going to the ports of South America, where fresh provisions are inferior, and cannot be kept fresh more than a few hours, the advantages must be obvious to every one. A vessel leaving the Colonies with passengers, requiring 20 tons of water for the passage to England, by taking only 12 tons, and eight tons more of freight, and less live stock (which are very likely to be lost on the passage round the Horn), the additional amount of freight, and the saving in live stock would more than cover every expense she would be put to in this port, and afford the opportunity of giving the crew fresh meat for ten days in the middle of the passage.

In the last few months two vessels going to the westward received damage off the Horn, and bore up for the Falklands. One reached Port William in safety, and was condemned; the other, from the master not knowing the

settlement, was lost during the thick weather in attempting to reach Port Egmont, in the West Falkland, approaching which the islets and reefs are very numerous. These circumstances show the necessity of making that port being better known, and induced me to send you these remarks.

Governor Moody and his officers are most anxious to render every attention to the masters and passengers of vessels calling, and every aid to give dispatch.

I cannot speak too highly of the kind attentions and assistance my passengers and self received from Captain Sullivan and officers of H.B.M. brig *Philomel*. I feel them the more, as during my wanderings in New Zealand I have seen some instances in which the interests of British subjects have been much neglected by Commanders of Her Majesty's ships (in one instance in a British port the Commander of a French frigate gave protection to British subjects when our own ships had refused and left the port.) But did they know the respect it causes our navy to be held in by the merchant service, and the kind feelings it produces between all classes of British seamen, from high to low, they would not be deterred from rendering attention and assistance by individual instances of ingratitude.*

Trusting you will deem this worthy of insertion,

WILLIAM C. DALBY.

At sea April 4, 1845. *Master of the barque Bolina.*

ELPHINSTONE ROCK.—We have received the following account of an important danger off the Natunas Group in the China sea from Messrs. Melling and Payne, Chartsellers, Liverpool.

Barque Lord Elphinstone, Whampoa Reach, China, January 14th 1845.

SIR,—I send you an account of the coral rock I discovered, which I have named after my vessel, the Elphinstone, under my command, from Madras to China.

"At 4h. P.M. on Friday, the 8th of November, 1844, I discovered a high rock on the weather bow, bearing E.b.S. ½ S., sounded and found 45 fathoms. We steered to pass to the leeward of it, when, suddenly the alarm was given that rocks were under our bows, at which we hauled off, steered south-west, and ranged along under a continuation of rocks in 27 to 23 fathoms, within 100 yards of them. In many places there appeared to be not more than eight or ten feet of water over some of the patches, which consisted of coral rock with patches of sand. The rock I have mentioned stands high out of the water, almost as high as Pedro Branco, off the Straits of Singapore. From the southward a reef projects about a mile, at the end of which is a rock, which is partially covered at high water. From this a dangerous reef projects a long way out to leeward, and is probably, a continuation of Hutton's or Diana Shoals. To the northward of the main rock there appears to be a safe passage, as, one night in August, 1840, I came through it in beating down the China sea, and found regular soundings of from 40 to 35 fathoms; at all events, there is no safe passage to the southward. I made the rock in long. 107° 51′ 30″ E., by three chronometers, measured from Pedro Branco, in a run of three days, and by several sets of lunars, taken some days after, and which agreed with the watches. It is in latitude 3° 20′ N., and in a dark night, in thick weather, a ship would be on the rock before it could be seen, as the soundings are no guide; you are out of 40 to 23 fathoms in a cast. When first seen the Peaked Island bore, by azimuth compass, N. 15° E., Haycock Island S.E. 1° W., [Query, S. 21° W.] Low Island S. 5° E., South-west Island, with the Sugarloaf on the Grand Natunas just open to the eastward of it, N. 59° E., and the centre of Elphinstone Rock, S. 71° E.

HUGH CRAWFORD.

* We trust that this observation will not be lost on the officers of H.M. Barque, &c.

Portland Harbour of Refuge and Weymouth Railway.

It is very agreeable for us to see so large, so pleasing, and so authoritative a recapitulation as the report of the Commissioners about Harbours of Refuge; of the facts, the plans, and the advantages which we have for so many years been continually bringing forward before the public, and urging our reasons for the adoption of a Breakwater in Portland Roads. To whatever extent the loss of life might have been spared by the one harbour of refuge having been formed at Weymouth long ago, we still must console ourselves under the necessity of believing it better late than never.

Although, in a great measure, unacquainted with naval affairs, and by no means conversant with nautical terms and phraseology, it is sufficiently obvious to suppose that ships lying in roadsteads, which are exposed to winds blowing strongly from a certain quarter, would be more liable to be damaged than if that quarter were covered by a breakwater. Indeed all such matters are now settled and established by the report of the Commissioners on Harbours of Refuge, in reference to the absolute necessity for a Breakwater, to protect the Roads of Portland from the only winds which at present produce disastrous consequences.

As every locality is entitled to all the advantages of its own peculiar character, and as there is not a situation on our coasts, which, by the help of a Breakwater, could be considered more adapted to impart a larger share of convenience to a great portion of the country, we cannot be too much rejoiced at the gratifying decision to which the Commissioners have arrived. "Grata superveniet quæ non sperabitur hora." And how gratifying must it be to you, to witness the accomplishment of all those suggestions which you and your friends have been for so many years publishing and urging to the consideration of the world; and the fulfilment of those well-founded anticipations, sanctioned and realised, by the full acquiescence of the ruling powers.

We have frequently observed, that great and useful improvements must be always accompanied by collateral advantages, which may not have been contemplated *ab initio*; but in this case of a harbour in Portland Roads, by being made perfectly secure by a Breakwater, there are hardly any limits even to the great advantages which must accrue to the nation at large, as well as to Weymouth and its immediate neighbourhood.

Monpoly, whether it be of cities, of towns, or of persons, is the greatest evil that can afflict civilized society. The distribution of natural advantages seems to have been the result of the beneficent intentions of the Creator, so that every locality might not only serve itself, but contribute its share to the general good of the whole. Every situation is the centre of its own power, and upon the due balance of these powers the whole civilized world would arrive at its highest state of perfection.

The analogy existing between the whole physical world, and the due regulation of the destinies of mankind, would thus point out the limits which ought to regulate the whole constitution of society.

In contravention of this great law, we find the grasping hand of monopolizing adventurers for ever interfering with this distribution; and places constrained to perform duties for which they are unfit, merely to serve the purpose of certain knots of adventurers.

I might enter very largely into this subject, and at a future time I may be induced to do so, but for the present it is quite sufficient to say, that for the general advantage of the country, a large, safe, and commodious harbour in the centre of our southern coast, so clearly pointed out by its local character, must ultimately supersede all unsafe harbours, loaded with every obstruction, even though they are found beneficial to those masses of our population congregated in great cities, who, by their wealth and fleeting superiority, can regulate the country, and monopolize all our industry by their overbearing avarice.

We find, as we have before often said, that every great and beneficial improvement in natural character, when well supported by fact and by principle, must call forth other advantages, not at first so clearly obvious; thus with a safe and good harbour at Weymouth, we find that the modes of conveyance will be speedily undertaken to further those beneficial views which such an important step must clearly require and display. We thus find that railroads in all directions are now advancing, to complete the work which this magnificent Breakwater will open to the views and the interests of the country.

I am fearful of exceeding the due limits of a letter, therefore I shall defer enlarging on the very numerous points of view under which we may trace the great extent of general good which is certain to follow the adoption of the foregoing national work, both as regarding our country, should it unfortunately be engaged in war, as well as to the furtherance such harbour will give to all the lawful commercial enterprise which may ensue to our comfort and advantage when in the enjoyment of the blessings of peace. F.

PORTLAND BREAKWATER.

The local advantage of this great improvement would be its affecting the interests of all the central southern parts of Britain; and its national importance would result from its counterpoising the opposite, and now very celebrated works of Cherbourg, and from its forming the very best situated, most comprehensive, and safest, wet harbour in the kingdom, (of four square miles in extent,) as deep reflection and much investigation have corroborated and confirmed—ships passing at once from the open British Channel into a deep water harbour within the bosom of Portland island and Weymouth.

LOSS OF THE BRIG CHARLES.—We have been favoured with the perusal of a letter from a passenger in the Belgic brig Charles, Commander C. Hoed, Lieutenant of the 2nd class in the Belgian Marine, from this to Manila, dated Macassar 2nd ultimo, giving an account of the loss of the brig on the coast of Borneo.

The letter states that at daybreak on the 17th of February they unfortunately grounded upon a sand bank about four miles from the coast of Borneo opposite the Coti river. As soon as they were visible from the shore a number of prahus put off and when all their number had collected (upwards of twenty-four) they formed a crescent, and pulled straight for the stern of the vessel. Every means were tried to get the vessel off as by throwing part of the cargo overboard, but in vain. As the only arms in the brig were two old guns, dangerous to fire with, and seven muskets, there appeared no alternative but to forsake the vessel and take to the boats. When the pirates came up to the brig they surrounded her, firing into and then boarded her. Some of them followed the vessel's boats but after firing a few shots they rejoined their comrades. After suffering from the intense heat of the sun, and shortness of water, the danger of pirates, wind and waves, Lieutenant Hoed, his crew, &c., arrived in safety at Macassar on the 26th of February, where they were most hospitably received, and had every kindness and attention shown them by the European inhabitants, who took them into their houses, clothed them, and did every thing they could to promote their comfort.

There was a strong fleet at Macassar on their arrival which afterwards went to look for the vessel, which the writer of the letter thinks it is probable they will find, though stripped of every thing. This is probably the Expedition which we mentioned in our paper of the 2nd instant as having left Batavia for Macassar. The capture of the Charles it will be seen happened

at the same place where Mr. Murray and his Expedition were so treacherously dealt with, and was no doubt the work of the same individuals or part of them, and will therefore afford an additional motive for some vessels of war being sent to that part of Borneo to enquire into these events, and if proper, to inflict punishment, which the pirates in that quarter richly deserve for the numerous instances of their treachery and cruelty towards European vessels.—*Honghong Register.*

Loss of the Palanquin.—The following account of the loss of this vessel was copied from the *Bombay Times*:—Mr. Edward Mara states that, on the 20th Dec., 1844, having passed Dia Garcia, the weather being cloudy, and the sun obscured, I was unable to get any observations, and proceeded on my way towards Bombay, steering N.b.E. till five o'clock on the morning of the 21st, when we struck on Nelson's Island, in latitude 5° 40′ S., longitude 72° 24′ E., being one of the Chagos Archipelago group, towards which we were driven during the night by a strong northerly current. Every effort was made to get her off, but without success, and the weather the day following becoming stormy, with a high sea, not only tended to the greater destruction of the vessel, but also rendered it impossible for us to do anything. However as, soon as it moderated, we endeavoured to save as much of the cargo as possible, some of which was landed, but in a damaged state, owing to the heavy sea and our being obliged to drag it through the surf.

After remaining 21 days, and the vessel being a perfect wreck, we were compelled to leave her, the island being uninhabited, and having no hopes of seeing a ship pass that way. The crew, consisting of thirteen men, two officers, and myself, in all being sixteen, started in three boats—the gig, pinnace, and launch; the first in charge of my brother, Mr. Samuel Mara, chief officer, the next, Mr. Alexander Dobie, second officer; and taking the last myself, in hopes of reaching Bombay. After twenty-five days' exposure to very bad weather, we made the Adoumatti Atoll, one of the Maldive Islands, in latitude 2° 7′ N., and long. 73° 33′ E., where we remained two days, and again proceeded on our way with two boats, the gig having been swamped about thirty miles to the south of the equator, but providentially no lives lost.

We now steered towards the Sultan's Island, in hopes of getting a boat to take us on, but in crossing the Vehamando Channel, we were driven to the westward with strong currents and adverse winds. Two days after leaving the Adoumatti Atoll, the second officer and six men in the pinnace parted company from us, since which time to this date I have neither seen nor heard anything of them. When we reached 3° 30′ N., we were again driven back by strong currents to the equator, where we were becalmed and reduced to the extreme want of two biscuits amongst us all during the day. We at last, by continually pulling at the oars, reached the Suadavia Atoll, another of the Maldive group, in lat. 11° 51′ N., and long. 73° 13′ E. We have now been on this island 11 days, being 51 days from the time of leaving Nelson Island, and here we must remain till the change of the monsoon, when the Maldive boats proceed to Bombay, in which the Sultan has promised to send us.

N.B.—The island we struck on is not marked on my chart, but I suppose it to be Nelson Island, by observations taken there, and Horsburgh's account of the same.—*Bombay, 12th April.*

Steam Yacht for the King of the French.—Messrs Penn and Son, Engineers of Greenwich have received orders to construct a pair of engines for a new iron yacht building in France, for the private use of his Majesty the King of the French. This new yacht is to be propelled by the screw and her engines and screw are to be exactly similar to those of the Fairy the yacht tender of our Gracious Sovereign.—*Evening Paper.*

July Regattas of the Royal Yacht Clubs.

July 16.—The Royal Thames Yacht Club contend this day in the *last* club-match for the season of 1845; and most of their well-known racing yachts will in a few days afterwards proceed to the Isle of Wight *via* Harwich.

July 22 and 23—Grand Regatta at Cork under the superintendence of the Royal Cork Yacht Club.—[Vide p. 325.]

July 25 and 26—Sailing and rowing regatta of the Royal Harwich Yacht Club, in Harwich Harbour, Friday and Saturday. *Vessels belonging to members of any Royal Yacht Club will be permitted to race.* This regatta immediately following Ipswich races, and preceding the Assizes, is expected to be a very dashing affair. Palmam qui meruit ferat!

The Yachting Cruize from Cork to Harwich.

(Continued from page 326.)

Having stated that Royal Yacht clubs are at present flourishing at Cork, Plymouth, Southampton, Cowes, and Harwich (now also announcing that a new one has just been formed at Ryde, I.W.) and having already given at pp. 325, 326, lists of the vessels forming the Cork and Plymouth squadrons, we here proceed in due order to subjoin, and corrected to the present time, lists of the Royal Yacht Squadron of Cowes, and the Royal Southern Yacht Club of Southampton,* deferring our notice of that of Harwich till the next number of the *Nautical*.

List of the Royal Yacht Squadron—1845.†

Schooners.

Vessels.	Tons.	Owners.
Ariel	118	A. Hill
Brilliant	393	G. H. Ackers
Camilla	147	T. Halifax
Circassian	160	Major C. Philipps
Esmeralda	129	T. W. Fleming
Fairy	143	W. Peareth
Flirt	132	Sir R. B. Graham
Flower of Yarrow	141	R. Lumley
Galatea	190	C. R. M. Talbot, M.P.
Gem	125	J. Hambrough
Georgian	173	W. Lyon
Gitana	168	J. D. Murray
Hawk	33	Capt. G. Keane
Hussar	120	T. P. Williams, M.P.
Julia	42	L. B. Mackinnon
Louisa	123	Sir H. Parker
Maud	119	T Legh
Merlin	104	Viscount Milton
Peri	59	Capt. C. Bulkeley
Resolution	164	Duke of Rutland
Rostellan	70	T. G. French
Snake	33	J. Devonport, jun.
Siren	161	Lord Keane
Wanderer	141	B. Boyd
Xarifa	183	Earl of Wilton
Zephyretta	180	H. Hope

Cutters.

Vessels.	Tons.	Owners.
Adelaide	142	Sir R. G. Booth
Alarm	193	J. Weld
Albatross	75	J. C. Blackett
Amazon	75	Sir J. B. Walsh
Amulet	51	J. Thomson
Ariadne	85	Capt. Ponsonby
Ariel	71	J. D. M. Stirling
Arrow	84	Lord Godolphin
Aurora	40	W. Beach
Avenger	35	J. Saunderson
Breeze	55	Viscount Exmouth
Caprice	100	W Potts
Caroline	60	C. Vandaleur
Charlotte	79	Hon. W. H. W. Hedges
Charm	73	M. J. Higgins
Corsair	84	J. Congreve
Cynthia	40	R. Frankland
Dove	50	L. Shedden
Dream	100	G. Bentinck
Edith	70	J. C. Ewart
Elizabeth	65	Hon. A. Moreton
Emerald	58	J. L. Symonds
Eudora	59	N. Alexander, M.P.
Falcon	60	J. Beardmore
Fanny	91	Sir E. Scott
Flower of Yarrow	183	Marq. Conyngham

* R.S.Y.C. unavoidably posponed, but see *ante* p. 102.

† See the *Nautical* of 1844, p. 520, for a list of the Royal Yacht Squadron of that year. By comparing the two lists it will be seen that many new vessels have recently been added to the club. We may add that on every part of the coast yachting is as it ought to be, considerably on the increase, and we hope soon to see a "*Royal Yorkshire* Yacht Squadron" established at Hull.

CUTTERS, *Continued.*

Vessels.	Tons.	Owners.
Forest Fly	36	W. Hornby
Frisk	47	Hon. W. H. Hare
Ganymede	70	J. H. W. P. S. Pigott
Gauntlet	59	A. Fountaine
Gazelle	87	T. P. Williams, M.P.
Hebe	68	A. W. Corbet
Intrepid	55	Duke of Beaufort
Lufra	81	Lord J. Scott, M.P.
Maid o' the Mist	30	H. Studdy
Medina	44	A. J. Hambrough
Naiad	70	J. Quantock
Nautilus	103	R. S. Wardell
Noran	71	Sir H. B. Hoghton
Nymph	31	Sir J. Bayley
Osprey	59	J. Petre
Owen Glendwr	123	N. Barwell
Pearl	130	Marq. of Anglesey
Petrel	98	Earl of Ilchester
Phantom	55	Hon. G. A. Byron
Psyche	60	B. H. Jones
Romulus	90	Lord Wharncliffe
Rowena	33	G. Simpson
Sea Flower	35	T. M. Gibson, M.P.

CUTTERS, *Continued.*

Vessels.	Tons.	Owners.
Snake	66	Lord Lovaine
Sparrowhawk	84	T. Hallifax
Spider	33	J. E. Lacon
Stormfinch	63	Lieut. Col. Bowers
Siren	45	Sir T. Wilson
Talisman	96	R. Meiklam
Tar	33	Rev. Denis George
Therese	121	Earl of Desart
Turquoise	77	C. H. Coote
Vandal	105	R. W. Cooper
Wave	54	Marquis of Blandford
Whim	49	C. Brett
Will o'th Wisp	45	Capt. C. Williams
Witch	70	H. Oglander
Wyvern	205	Duke of Marlb'rough
Zoe	35	H. Beaver

Kestrel, brgne, 202, Earl of Yarborough
Emmeline, brg, 204, E. N. Harvey
Gulnare lugger, 31, A. Greville
Columbine, yawl, 90, J. H. S. Barry
Eagle, yawl, 53, C. Ruding
Waterlily, yawl, 31, John Hibbert

The above 97 vessels form the Royal Yacht Squadron, and wear the *white* ensign of H.M. fleet, under Admiralty warrant. The Earl of Yarborough is the Commodore, the Marquis of Donegal, Vice-Commodore, and John Bates, Esq., R.N., Secretary. The Club-house is situate at Cowes.

HARWICH—Sunday, June 22, Sailed the R.H.Y.C. cutter Transit, Knight, Esq., for the river. Will return to attend Harwich Regatta, July 25-26.

THE ARCTIC EXPEDITION.—On June 2, the screw-propeller steam-sloop, *Rattler*, Com. G. W. Smith, commanding *pro tem.*, arrived at Sheerness at 11h. 30m. o'clock from the Orkney Islands, after having towed the *Erebus*, Capt. Sir John Franklin, and *Terror*, Captain Crozier, to Cape Wrath, and thence to the islands Barra and Rona, situated sixty miles N.W. of the Orkneys, where the ships composing the Arctic expedition took their final departure about noon, on the 4th, under the auspices of as favourable a breeze as could be well desired to waft them towards the icy regions they have been sent to explore. At parting a most exhilarating scene occurred, which will doubtlessly remain in the memory of all that had the gratification of participating in the farewell cheer to the brave fellows that have volunteered in so laudable and perilous a service. At this time the *Erebus* and *Terror*, and *Baretto Junior*, transport, were hove-to, rolling heavily from the violent swell that the recent gales had produced; a signal flying from the mast-head of the *Erebus* indicated Sir J. Franklin's order for all captains to proceed on board to receive their final instructions; this order having been completed, their return to their respective ships was the time chosen for manning the rigging of the two steamers in attendance. At the sound of the boatswain's pipe, the shrouds of the *Rattler* and *Blazer* were in one instant lined by their crews, all anxious to outvie each other in the pleasing task they were about to perform. The word was given, and three cheers, loud and hearty as ever escaped the lungs of British tars, saluted the ears of Sir J. Franklin and his gallant colleagues; in turn the crews of the discovery ships manned their rigging, and with their respective commanders and officers on the quarter-deck gave vent to cheers so long and powerful as

to leave not the slightest doubt of the physical energies of the men they came from, and their consequent fitness to encounter the difficulties that may shortly surround them; nor was this the only demonstration of the good feeling that existed between the crews and officers of the expedition and those of the steamers that accompanied it thus far in its progress towards the long-sought passage, as during their stay at Stromness the captain and officers of the *Rattler* were not only entertained on board the *Erebus*, but were also honoured by the company of Sir J. Franklin and his officers to dinner on board their own ship in return, and, as might be expected on such an occasion, good wishes without end were mutually exchanged over the parting glass. In reply to an appropriate address from Mr. Robertson, first Lieut. of the *Rattler*, on behalf of his brother officers, the veteran Commander of the squadron expressed in the most feeling manner his acknowledgments for the compliment that had been paid to himself and officers; at the same time adverting in high terms to the power of the *Rattler*, and the important services the expedition had already received through her able co-operation. The gallant officer also observed that he had hitherto had but few opportunities of witnessing the screw-propeller in practical operation; but from the expeditious manner in which the squadron had been conducted thus far towards its destination, his anticipations of success were most materially strengthened by its application to the ships under his command; and in expressing this opinion he felt much pleasure in congratulating Mr. F. P. Smith (who was present) on the complete success of his invention. The *Erebus* and *Terror* were, on several occasions, both taken in tow at one time by the *Rattler*, and in calm weather a speed of 6¼ knots was shown by Massey's log on board each ship. With a strong breeze ahead, and considerable sea, the rate was never less than four knots; but the greatest feat that the screw has yet performed in exhibiting its capabilities for tugging purposes was that of towing both vessels (whose combined tonnage is nearly 700 tons) through the Firth of Pentland, and thence to Cape Wrath, which was rendered more difficult by the swell then setting in from the Western Ocean, and the consequent breaking of nine-inch hawsers, which were used; at times even two of these immense ropes were insufficient to hold the *Erebus* and her consort, and the skill evinced by Capt. Smith and the officers of the *Rattler* in re-attaching the parted ships under such adverse circumstances justly merits the high compliment paid to them by Sir J. Franklin.

The *Blazer*, Capt. O. Stanley, had assigned to her charge the *Baretto*, transport, and succeeded in towing that vessel through the Firth in good style, considering the roughness of the weather, which evidently had a much greater effect on her paddle-wheels than on the screw of the *Rattler*, which was remarked by her holding much better way with that vessel in comparison when the water was smooth. The *Monkey*, steam-tug, had been in the first instance sent to tow the transport, but that vessel being upwards of 100 tons burden, and laden deeply with stores for the expedition, the *Monkey's* power was found to be inadequate to the task, except in the finest weather, and the *Blazer* was accordingly dispatched by the Admiralty to take her place. Prior to the arrival of the *Blazer*, the *Rattler* had on several occasions to fetch up the transport, in order that she might not part company with the rest of the squadron. In performing this service her rate in smooth water was seven knots exactly, and with a fresh wind ahead not less than five knots. These results, combined with the fact of the *Rattler* having during her late trip steamed upwards of 2,000 miles without the slightest derangement to her machinery, cannot fail to confirm the confidence that is daily increasing in this mode of propulsion.

It will be gratifying to those that have friends embarked in the Arctic expedition to learn that up to the time of their departure from the steamers,

no accident had occurred. Sir John Franklin and his associates were in excellent spirits, and full of hope. The next news that may be expected from the discovery will be by the transport, which leaves them at the edge of the ice. In running from Flamborough Head to Sheerness, a distance of 300 miles, the *Rattler* accomplished it in twenty-one hours. On her arrival at that place she received orders to come to Woolwich.

The following are the names of the officers of the expedition :—

Erebus Discovery Ship :—Captain—Sir John Franklin, K.C.H.; Commander—Jas. Fitzjames; Lieutenants—Graham Gore, Henry T. D. Le Vesconte, Jas. W. Fairholme; Surgeon—Stephen S. Stanley; Assistant Surgeon—Harry D. Goodsir; 2nd. Master—H. F. Collins; Mates—Chas. F. Des Vaux, Robert O. Sargent, E. Couch.

Terror :—Captain—Francis R. M. Crozier; Lieutenants—Edw. Little, Geo. H. Hodgson, John Irving; Surgeon—John S. Peddie; Assistant Surgeon—Alex. McDonald; Clerk in Charge—J. H. Helpman; Mates—Fred. Hornby, Robert Thomas.

Presentation of a Piece of Plate to Edward Riddle, F.R.A.S.

[The following little narrative of an event, in which many of our readers will feel an interest, is preserved in our pages as highly honourable to all parties which it concerned, and we are sure will be no less gratifying to the absent friends of Mr. Riddle than to those who were present on the occasion.]

The Masters of Greenwich Hospital Schools having, in March, 1845, resolved among themselves to present to Mr. Riddle a piece of Plate as a testimonial of their esteem, appointed a committee to carry their purpose into effect; and in April, the Rev. James Hill, M.A., Master of the Upper School, and Mr. Edward Hughes, Master of the Lower School, invited Mr. Riddle to inspect several articles of plate in Mr. Hill's apartments, requesting him to say which of them he preferred; and informing him, on the part of the Masters, that the one most acceptable to him, was intended as a present from them to himself.

Never having heard of the subject before, Mr. Riddle was greatly surprised at this announcement; and thanking his friends for their unexpected kindness, requested that he might be allowed to go home for a while, and revolve the matter in his mind; the several articles of plate being sent over to his apartments. After consulting with his family, he wrote a note to Mr. Hill, pointing out which of the articles submitted to his choice he preferred, and expressing his unconsciousness of having done anything to deserve it.

The committee then prepared a suitable address, which they placed in the hands of Admiral Sir J. A. Gordon, the Lieutenant-Governor of the Hospital, who submitted it to the Governor, Admiral the Honourable Sir Robert Stopford, G.C.B., by whom it was read and approved; the Governor, at the same time, expressing a wish that the plate might be presented to Mr. Riddle by his own hands, in the Council-room, in the presence of the gentlemen who had purchased it, the Officers of the Schools, and the Captains of Divisions among the boys, with such officers of the Hospital as might think proper to attend; and he appointed Saturday, the 24th of May, at two o'clock, as the time when he would attend for the purpose.

The committee, gratified by the Governor's approbation of what they had done, and the honour which he proposed to confer upon them, made arrangements accordingly.

On Saturday, May 24th—the Queen's birthday—the Captains of Divisions, preceded by the School band, were marched from the Schools to the Hospital by the drill sergeants, under the direction of Lieut. Rouse, R.N.,

superintending Lieutenant of the Schools, and ranged round the walls of the Council-room.

At two o'clock, the Governor, the Lieut.-Governor, several of the Officers of the Hospital, the Chaplain of the Schools, and the Chaplain of the Hospital entered the room; and, the Masters and Monitors of the Schools having assembled, the Governor stated briefly the object of the meeting, and directed the business to proceed; when the Rev. James Hill read the following address:—

"To Edward Riddle, Esq., F.R.A.S., Master of the Nautical School, Royal Hospital, Greenwich.

"Dear Sir,—While we, the Masters of the Royal Hospital Schools at Greenwich, unite in requesting your acceptance of the accompanying piece of Plate, we are conscious (knowing your retiring disposition) that had we solely consulted your wishes, we might have deprived ourselves of the pleasure we now feel in presenting you this testimony of our esteem, and in giving public expression to our motives and sentiments.

"Looking up to you, however, as our senior, with a feeling akin to filial regard, and entertaining the highest respect for the zeal and talents which you have devoted for upwards of twenty years to the cause of education in this Institution, and aware that, in it, you hold a position intimately connected with the naval and commercial interests of the country, we feel that we have, on this occasion, a duty to perform to the public, as well as to you and to ourselves.

"Were we to advert to your scientific labours, which are already before the world, we might appear partial witnesses—they do not await our judgment: your works have received the approbation of our highest Naval authorities, and of the most intellectual tribunals of this country.

"With regard to your moral worth, the calm approbation of your own mind could not be strengthened by any tribute which we could render to your uprightness and integrity.

"Turning, then, from these public virtues, to the less striking but more amiable qualities which adorn private life, we can, at least, testify our admiration of the consistent kindness and invariable courtesy which we have experienced from you in our daily intercourse.

"We hope that you may long continue to occupy that position on which you have reflected so much honour, and long afford us an example of professional zeal and social virtue.

(Signed) Edward F. Hughes, Edward Purcell, James Hamilton, James Hill, *Clk.*, J. R. Campbell, Thomas Morris, J. D. Atkinson, F. R. Dawson, Richard Petty, Henry Baillie, John Smith, and Henry Mugridge."

He then placed in the hands of the Governor the piece of Plate intended for presentation, on which is inscribed—

"*Presented to Edward Riddle, Esq., F.R.A.S., by the Masters of the Royal Hospital Schools at Greenwich, in testimony of their high estimation of his private worth, his professional abilities, and his scientific attainments, April*, 1845."

The Governor, in presenting it, spoke in substance as follows—

"Mr. Riddle, I have known you for twenty years—I know not whether you recollect my being here at that time [Mr. Riddle intimated that he recollected it perfectly], and I have great pleasure in presenting to you this piece of Plate, as a testimonial to your worth, from your colleagues; and in stating that I think the transaction equally creditably to you and to them.

"Since my official connection with this place, I have observed the steady and unobtrusive perseverance with which you have applied yourself to the

discharge of your duties; and I do not forget what the Institution owes to you for the firm stand which you made under some recent difficulties, which have now happily passed away."

Mr. Riddle, addressing the Governor, said—

"Admiral Sir Robert Stopford, before proceeding to thank my friends for their kind, totally unlooked-for, and, with unfeigned humility, let me add, their *unmerited* present, permit me to offer my acknowledgments to you for the part which you have taken this day.

"I shall always remember with pride, that an officer of your high standing in society, distinguished professional reputation, and official head of this great Institution, condescended, on the present occasion, to do honour to my friends and to me."

Mr. Riddle then made the following reply to the Address read by Mr. Hill.

"Gentlemen,—It is now 45 years since I commenced life as a teacher of youth; and, therefore, though not a very old man in the common acceptance of the term, I may fairly claim to range among the seniors of our profession.

"In 1821, the Commissioners and governors of this Royal Hospital were pleased to appoint me to the situation which, under a different title, I still continue to hold; I have, consequently, been connected with the Institution for nearly 24 years; and, referring to a paragraph in your Address, I trust that my labours may, to some extent, have been of advantage to the naval and commercial interests of the country.

"Many young men, my pupils at Greenwich, are doing themselves credit as Masters in the Royal Navy, and as Officers in the Merchant Service, in every part of the world; and some of them are among the ablest of our Naval Surveyors.

"In every situation in which I have been placed, it has been my endeavour to live in good fellowship, and to merit the regard of all connected with me: to do my own duty to the best of my ability, and to refrain from interfering with the business of my neighbours; and it is gratifying to me to find that my conduct in this respect, with regard to you, has attracted your favourable attention.

"With reference to the social relation in which some of us have stood with respect to each other, in times to which I need scarcely allude, I regard the handsome present which you have this day made me, as an evidence, among other things, that my conduct, in circumstances which were somewhat trying, has met your approbation; and as a pledge of your wish that in our several stations, we may continue to work together for the benefit of those whose education is entrusted to us, and the honour of the great establishment of which we are humble, but not unimportant members.

"In conclusion, Gentlemen, let me thank you, as I do very cordially, one and all, for this mark of your respect, and for the good and kind wishes with which you have accompanied it.

"May success attend all your undertakings here; and when you stand in the presence of Him, in whose eye all men are equal, may your greeting be 'well done, good and faithful servants!'"

Mr. Riddle was then congratulated by the gentlemen present, and the meeting dispersed.

The Phantom Ship.

Ship Wellington, at Sea, May, 1845.

Sir,—A few days since, on re-perusing a volume of Montgomery Martin's colonial work on the Cape of Good Hope and Mauritius, I was reminded by the credulity there displayed on the subject of the "Flying Dutchman," of a very curious occurrence, which happened to this ship off the Cape, when I

commanded her some years ago. Many of your readers will probably be interested in the following description, and though I have no desire to make any of them believers in the fabulous "Phantom Ship," I am quite sure, that had Mr. Martin witnessed the circumstance, it would have formed a goodly addition to the many *proofs* he has so naïvely given of the reality of the "Flying Dutchman."

"It was on the 10th of April, 1833, that the *Wellington*, on her homeward voyage from India, was on the bank of Agulhas, about 50 miles off the shore, when, at 10 A.M., a vessel was reported on the starboard bow, just visible from the fore-top-sail yard. At this time there was a light breeze from the northward, but such a heavy cross sea existed that the ship had not steerage way, but fell off and came up four or five points. To our surprise we found two or three hours later that we were fast approaching the stranger, and at 5 P.M. we had nearly got abreast of her. In the mean time, the breeze continuing very light, we had shortened all sail to prevent the sails from being beaten to pieces—even furling all the small sails and lowering the topsails on the cap. At 5h. 30m. finding the motion still on the increase (being the worst I ever witnessed) and hoping to render it less annoying, we watched the ship's falling off, and managed to wear round on the larboard tack. Most singular to relate, we continued *stern foremost* to pass by the stranger as rapidly as ever; and at 6h. 30m. we passed within five miles of her, leaving her fast to the eastward. She appeared to be a ship of between 300 and 400 tons, had all her sails set, and seemed to be suffering very little from the swell. She shewed no colours, her commander probably believing (as Mr. Martin would doubtlessly have done) that we were the veritable 'Flying Dutchman.'"

The cause of this very remarkable occurrence must have been a strong current affecting our ship, probably from a greater draft of water, far more than the stranger. We subsequently found, by observation, that we had been set during 13 hours W.b.S. 85 *miles!*

To the Editor, &c. JAMES LIDDELL.

P.S. Let me add a few words touching a magnificent star near the southern cross (declination about 61° S.) which, during my homeward voyage, I have gazed on night after night with much pleasure. I learned from the talented astronomer, Mr. Maclean, at the Cape that this *new* star (as I had fancied it) was one of the minor ones in Argo, and had attained its greatest splendour in 1843, but not having been in the southern hemisphere before this voyage, during the past five years I had never witnessed it before. As comparatively few of your readers can have had an opportunity of seeing this beautiful star, whose splendour will probably soon pass away, I may mention that it is as red as Aldebaran, and of such surpassing brilliancy that according to Mr. Maclear, Sirius alone equals it in magnitude. It has occurred to me that some prominent notice of such remarkable changes in the stars should be given by astronomers. Possibly, in this case, it may have been done without coming to my observation, and if so, you will no doubt kindly inform me.

SOUNDINGS OF THE BEAULY FIRTH NEAR INVERNESS.

The Admiralty survey of the Beauly Firth and the approaches to Inverness has just been completed by Captain Otter, and the officers of the *Sparrow*; and we are heartily glad that we have now authentic information to proceed upon, should an increase of trade lead to the improvement of our navigation. The survey was begun by Capt. Slater, in 1837, and the object of re-sounding it so minutely at present was to ascertain the exact channel and greatest depth of water that vessels could command approaching Inverness. *It appears* there are two channels leading up as far as a shoal called

the Meikle Mee, extending out from Craighton Cottage. On parts of this there are not more than three feet of water. The channel then becomes so contracted and uneven for a short distance as to render it difficult for vessels to pass, drawing more than nine feet of water, at low water. From this point we have deep water all the way up to Kessock Road. The narrow part of the channel could be dredged at comparatively little expense; but at all events a few buoys should be put down. The steam-boats coming up find it difficult to discover the channel after dusk, though so well acquainted with the place, and a buoy could be seen in twilight or haze when objects on land were not perceptible, In this survey the soundings have been taken in sections to Alturlie Point with the utmost care, and in such a manner that any single sounding can be *picked up* again, so that it could be easily ascertained hereafter whether any alteration had occurred in the channel. We have been much gratified with the extent, accuracy, and minuteness of this survey, so highly creditable to the officers of the *Sparrow*, and which could only be done by parties accustomed to such difficult and delicate operations. Our townsmen owe a debt of gratitude to the Admiralty for the valuable information they have placed at their disposal, and we trust they will make a united and strenuous exertion to have the channel improved. When the Caledonian Canal is completed, we hope to see our shipping increase, and the natural resources of our admirable situation called into more vigorous action.—*Inverness Courier.*

New Books.

Æolus.—A Circular Invitation to contribute to the History of the Weather. London: Sherwood, Paternoster-row; Paris: Bachelier.

Under the foregoing quaint title has appeared an essay, anonymous, and we will venture to add unique, on the weather; or, in more explicit terms, an enquiry into the causes which produce the different characters of the same seasons in different years! A field of enquiry more vast and comprehensive, and one demanding an acquaintance with the science of meteorology we were going to say, but we will add the secret working of Nature, it would be difficult to point out. Nevertheless, the author has fearlessly grappled with the task he set himself, under the title of "an invitation to contribute to the History of the Weather," and in seven "principles" has to his own satisfaction, at least, enunciated not only his theories for accounting for the various anomalies which do occur in our seasons, but has the temerity to venture on that dangerous field of authorship, "prognostication!" Who would not be weatherwise? Does not the usefulness of the art come home to every one? How many fine things would be preserved; nay, how many disappointments would be saved and the affairs of the world uninterrupted, could we foretell the nature of the weather we might assuredly expect at all times! But, from the earliest times, down to those of Francis Moore, Physician, and our more immediate cotemporary, the celebrated Murphy, alas! how futile all the efforts—how vain the hope to find and keep the talismanic wand that shall say, "this day month shall here be cloudless."

It has been well observed that there is nothing too bold for man to undertake; and, assuredly, the weather almanacs which have appeared of late years, are so many proofs of the correctness of the observation. Where science is at fault empiricism will have its sway. We are, however, departing from the work before us, of which we would like to give the reader some idea. But the space we can command in our present number is too limited for our purpose, and we shall therefore content ourselves for the present in having made it known to the meteorologists.

Monthy Record of Naval Movements.

Agincourt, 74, Capt. H. Lyster, arr. April 9, at Penang, from China.

Canopus, 84, Capt. Moresby, 29th May, arr. at Portsmouth; *Collingwood*, Capt. Smart, flag of Rear-Admiral Sir G. Seymour, 13th Jan. to sail from Valparaiso,—22nd, arr. at Arica; *Cormorant*, with flag of Sir G. Seymour, Jan. 24, arr. Callao, Jan 1; and *Collingwood* sailed for Callao, arr. 29th; *Caryxfort*, 26, Capt. Right Hon. Lord G. Paulet, June 18, arr. Portsmouth, from South America; *Comus*, April 18, arr. at Rio.

Daphne, 20, Capt. Onslow, arr. at Valparaiso, from S. Carlos and Realejo, on Nov. 1,—8th, sailed for Arica to relieve *Talbot*, June 24, sailed for Callao; *Dolphin*, April 18, arr. at Rio; *Electra*, Com. Darley, May 26, arr. at Portsmouth from Bermuda,—sailed April 26,—June 7, paid off.

Fisguard, Capt. Duntze, Jan. 2, left Valparaiso, 10th, arr. at Arica; *Fox*, Capt. Sir H. Blackwood, April 10, sailed from Trincomalee; *Firebrand*, st. v., with Mr. Ousely Gore, April 21, left Rio for River Plate.

Grecian, 16, Com. Montgomery, May 8, touch at Madeira; *Herald*, surv. v., Capt. Kellett, June 11, arr. at Plymouth; *Hazard*, 18, Com.
Feb. 6, at Sydney; *Illustrious*, 74, Capt. Erskine, with flag of Vice-Adm. Sir C. Adam, May 27, arr. at Portsmouth.

Modeste, 18, Com. Baillie, Mar. 10, at Valparaiso.

Rose, 18, Com. Pelley, May 26, at Bermuda; *Styx*, st. v., Com. Hornby, May 30, left Plymouth for Africa; *Serpent*, Com. Neville, April 10, sailed from Trincomalee; *Spartan*, May 18, arr. Port Royal, from Barbados.

Talbot, 26, Capt. Sir T. Thompson, Nov. 15, left Arica for Valparaiso, Dec. 5, arr., Jan. 3, sailed for Society Island; June 4, *Trafalgar* arr. Spithead; *Thalia*, 42, Capt. Hope, April 4, at Mazatlan; *Vulture*, st. v., Capt. J. McDougal, June 10, arr. Devonport, 18th, sailed for China.

H. M.'s sloop, *Wolverine*, and the st. v. *Phlegethon*, were to convey Capt. Bethune and Mr. Wise from Singapore to their destination.

Portsmouth.—Ships in Port.—*St. Vincent*, *Queen*, *Trafalgar*, *Rodney*, *Albion*, *Superb*, *Vanguard*, *Canopus*, *Vernon*, *Caryxfort*; at Spithead *Victory*, *Hibernia*, *Victoria and Albert*, yacht, *Excellent*, *Resistance*, *Siren*, *Nautilus*, *Comet*, in harbour.

Devonport.—In Harbour—*Caledonia*, *Hecate*, *Jackall*, *Confiance*. In Barnpool—*Herald*, *Pandora*.

The African Squadron.—*Hecate*, steam-sloop, Com. West, is ordered to the coast of Africa. Twenty boys have been drafted from the *Victory*, and sent to her for distribution among the squadron on that station, which consists of the *Actæon*, 26, Capt. Mansell; *Penelope*, 22, steam-frigate, Commodore Jones; *Larne*, 18, Com. Brisbane; *Wasp*, 18, Com. Usher; *Lilly*, 16, Com. Newton; *Ringdove*, 16, Com. Sir W. Daniel; *Albatross*, 16, Com. Yorke; *Flying Fish*, 12, Com. Harris; *Espoir*, 10, Com. Hand; *Pantaloon*, 10, Com. Wilson; *Rapid*, 10, Com. Earle; *Rolla*, 10, Com. Simpson; *Sealark*, 10, Com. Gooch; *Waterwitch*, 10, Com. T. F. Birch; *Alert*, 6, Com. Bosanquet; *Cygnet*, 6, Com. Layton; *Ferret*, 6, Com. Oake; *Heroine*, 6, Com. Foote; *Ranger*, 6, Com. Anderson; *Star*, 6, Com. Dunlop; and the steam-sloops, *Ardent*, Com. Russell; *Eclair*, Com. Estcourt: *Growler*, 6, Com. Buckle; *Hydra*, 4, Com. Young; *Styx*, Com. Hornby; and *Prometheus*, 1, Com. Hay. The *Stromboli*, steam-sloop, Com. Fisher, is ordered to join the squadron from the Irish station.

Coast of Africa.—A most distressing circumstance has occurred in the African squadron. The *Wasp*, 18, Com. S. H. Usher, took a prize, which was sent to Sierra Leone to be condemned. On her way this prize fell in with and took another slaver; the Lieut. in command, still keeping charge of the first vessel, put a Midshipman, named Harmer, with eight men, into the other. The vessels then separated. Unfortunately, Mr. Harmer allowed a strong party of the slave crew to remain out of irons, and at night they

rose and murdered every Englishman on board; and when daylight broke, exchanged signals with and fired at the other prize, and then bore away. In a day or two afterwards she fell in with the *Star*, 6, Com. Dunlop, who took her, and brought the whole of her murderous piratical crew to Ascension. The villains will shortly be sent to England in the *Heroine*, 6, Lieut.-Com. Foote, and *Rapid*, 10, Com. Earle.

Further confirmation of the murder of the midshipman and eight men of the *Wasp*, 18, Com. Usher, by a crew of a slaver, in which they were left in charge, has been received. It appears that Lieut. Stupart, who was in charge of this prize, shifted to the other, which he had taken, and which was full of slaves, and left the midshipman to navigate the first vessel to Sierra Leone. The poor fellows must have sold their lives dearly from the numerous wounds inflicted on the inhuman ruffians. The murderers are hourly expected in England; but it is doubtful whether they can be legally tried here.

ROYAL VISIT TO THE FLEET AND THE ISLE OF WIGHT.—On the morning of the 19th of June, Her Majesty and Prince Albert, with the Prince of Wales, the Princess Royal, the Princess Alice Maude, and the Prince Alfred, and suite, arrived at the Gosport terminus at a quarter to twelve o'clock, and visited the squadron.

PROMOTIONS AND APPOINTMENTS.

(From the Naval and Military Gazette.)

PROMOTIONS.

CAPTAINS—Hon. S. T. Carnegie.

COMMANDERS—J. E. Katon, B. Drury

LIEUTENANTS—W. F. Warren, L. C. Tonge, F. D. Yonge, C. M. Luckraft, J. A. H. Boyd.

SURGEON—G. M. McClure.

APPOINTMENTS.

REAR ADMIRAL—H. Parker, C.B., to command Experimental Squadron.

CAPTAIN—J. B. Maxwell to *Crocidile*.

COMMANDERS—J. McCleverty (1842) R. Naval College—J. West to *William and Mary* yacht—Fisher to *Stromboli*—N. C. Dunn to *Royal Sovereign*.

LIEUTENANTS—C. M. Luckraft and G. Pigott to *Siren*—W. S. Miller (1841) to *Vernon*—J. F. Tottenham (1844) to *Resistance*—J. A. Pritchard (1842) to command *Camelion*—Hon. J. W. Spencer to study at Naval College—W. Bridge to *Hibernia*—C. P. Ladd (1815) reappointed to *Royal Sovereign* for steam packet service—A. S. Symes (1816) to *Redwing*—W. G. Maude (b) and T. Hodgskinson (1841) to *Caledonia*—A. Parks (1815) to *Cuckoo*—C. Haydon (1810) to *Ocean*—J. K. Hancock (1843) to *Hecate*—F. S. Tremlett (1843) to *Agincourt*—M. C. Forster (1830) to *Rodney*—J. A. Macdonald to command *Spitfire*—G. R. Wolrige and H. Trollope to *Excellent*—A. Thompson (1815) to *Victory*—G. Douglas to *Hibernia*.

MASTERS—S S. Flinn to *Victory*—J. Taylor to *Ocean*—R. Browne to *Vanguard*—G. Nelson to *Queen*.

MATES—E. Scott, W. R. G. Palliser to *Excellent*—E. H. D'Aeth to *Queen*—L. R. Reynolds to *Hibernia*—G. M. Smith to *Trafalgar*—E. Scroggs to *Hecla*.

SECOND MASTERS—G. H. Forster to *Fairy*—F. J. Kent to *Lightning*—J. Fiddes to *Lizard*—A. R. Elliot to *Resistance*—D. Roberts to *Cuckoo*.

MIDSHIPMEN—G. Parker, G. Balfour, E. S. Groul, and T. R. Alexander to *Hibernia*—M. B. Fitzgerald to *Vulture*—E. Holmes and J. Alexander to *St. Vincent*—W. B. Anderson to *Albion*.

NAVAL CADETS—F. T. Seymour to *Queen*—H. G. Belson to *Rodney*.

SURGEONS—H. Gamble to *Cuckoo*—A. Henderson to *Caledonia*—T. Nation and E. Nolloth to *Hecate*.

ASSISTANT SURGEONS—G. Ball and S. Harret to *Caledonia*—H. S. Wilmot to *Crescent*—J. Harvey to *Alban*—J. Sole to *Imaum*—J. Cambell to *Actæon*.

PAYMASTERS and PURSERS—H. Dyer to *Hecate*—S. Butcher to *Resistance*—G. Burney to *Alert*.

CLERK—R. Kirkpatrick to *Agincourt*.

COAST GUARD.

Appointments—Lieut. Stokes, R.N., to Challaborough—Lieut. Coles to Langton Lieut. J. Allen to *Tartar*—Lieut. G. F. Westbrook to *Defence*—Lieut. J. Hains to *Assassin*—Lieut. J. Travers to command a station.

MARRIAGES, AND DEATHS.

Marriages.

June 18, at Twickenham, Lieut. E. E. Turnour, R.N., to Helen, youngest daughter of the late W. Davies, Esq., of Little Strawberry Hill.

June 19, at St. George's, Hanover Square, L. Lloyd, Jun. Esq., of Green Street, Grosvenor Square, to Frances daughter of the late Hon. Admiral F. P. Irby, C.B.

June 14, Capt. H. Edgell, R.N. of H.M.S. Siren, to Miss Caroline Rossiter, of Highcliff House, Bucks.

June 19th, at Portsmouth, Com. W. C. Chamberlain, R.N., to Eliza Jane, eldest daughter of the late Capt. Basil Hall, R.N.

Deaths.

At Gloucester, May 2, Capt. R. Hardward, R.N.

April 1, at Sea, Lieut. G. Campbell Briggs, aged 26 years.

METEOROLOGICAL REGISTER.

Kept at Croom's Hill, Greenwich, by Mr. W. Rogerson, of the Royal Observatory.
From the 21st May, to the 20th June, 1845.

Month Day.	Week Day.	Barometer.		Fahrenheit Thermometer, In the Shade.				Wind. Quarter.		Wind. Strength		Weather.	
		9 A.M.	3 P.M.	9 A.M.	3 P.M.	Min	Max	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.
		In Dec.	In Dec.	°	°	°	°						
21	W.	29·74	29·60	48	46	40	48	N	NW	5	5	qop 2)	qor (3) (4)
22	Th	29·56	29·68	50	52	41	55	NE	NE	6	6	qbc	qbcphr (3
23	F.	29·76	29·80	44	55	42	56	NW	NW	5	4	qbcp (2	or (4)
24	S.	29·80	29·80	47	56	43	57	W	W	2	2	o	bcmp (4
25	Su.	29·78	29·72	48	51	44	54	E	E	2	1	or (2)	or (3) 4)
26	M.	29·60	29·60	49	55	44	56	SW	S	2	2	op (2)	bc
27	Tu.	29·72	29·76	52	64	38	66	NE	NE	3	4	bcf	bc
28	W.	29·78	29·80	55	64	47	65	E	NE	4	2	op (2)	o
29	Th.	29·70	29·66	52	52	49	53	N	N	4	3	or 1) (2)	or (3) (4)
30	F.	29·73	29·89	50	60	47	63	N	N	4	4	op (2	bc
31	S.	30·20	30·20	52	64	44	65	NE	SW	3	1	bm	bcm
1	Su.	30·16	30·00	60	68	46	70	W	SW	2	2	bc	bc
2	M.	29·98	29·88	62	65	51	75	SW	S	1	2	bcm	bc
3	Tu.	29·62	29·52	62	72	52	72	SW	SW	2	3	bc	bcp (3
4	W.	29·52	29·56	56	60	46	62	SW	SW	5	5	bcr (1 2)	bc
5	Th.	29·60	29·60	59	64	50	65	SW	SW	4	4	bcp 2)	bcp (3
6	F.	29·58	29·72	61	64	56	65	SW	SW	6	7	qbc	qbc
7	S.	29·90	29·86	60	66	52	68	SW	SW	4	5	bc	qbcp (4
8	Su.	29·85	29·99	53	55	46	56	SW	W	5	6	qbc	qo
9	M.	30·38	30·40	54	66	45	68	W	W	1	2	bcm	bcm
10	Tu.	30·38	30·30	58	72	46	74	N	NE	2	2	bm	b
11	W.	30·25	30·23	61	74	48	75	NE	NE	3	3	bm	b
12	Th.	30·23	30·23	66	80	53	81	NE	NE	1	2	b	b
13	F.	30·23	30·21	65	83	58	84	N	NE	1	2	bcmf	bcml
14	S.	30·18	30·14	67	80	61	81	N	NE	2	3	bc	jb
15	Su.	30·10	30·00	68	78	57	79	SE	SE	2	2	bcm	bcm
16	M.	29·89	29·87	67	75	60	76	S	S	2	3	bcm	bcm
17	Tu.	29·86	29·82	68	72	58	74	S	SE	1	1	bcmrt 2)	bcpt (4
18	W.	29·80	29·84	60	62	57	63	W	W	1	2	or 2)	bc
19	Th.	30·00	30·04	60	66	48	70	SW	NE	1	1	bcm	bcm
20	F.	30·15	30·17	64	70	52	72	NE	NE	4	4	bc	bc

MAY 1845.—Mean height of the Barometer—29·828 inches; Mean temperature —49·5 degrees; depth of rain fallen 2·25 inches.

TO OUR FRIENDS AND CORRESPONDENTS.

The General Index to the Nautical Magazine, from its commencement in 1832, to the year 1843 inclusive, is in the press, and will be shortly ready for publication.

In answer to our correspondent on the "Nautical Almanac," there is no such extension of it intended as that to which he alludes.

We are compelled to reserve the communication on "Bermuda."

We have communicated with our correspondent on the "Merchant Service."

HUNT Printer, 3, New Church Street, Edgware Road.

Voyage of H.M.S. Blonde, Capt. F. Mason, *from Cape Frio to Berkeley Sound.*

(Continued from p. 283.)

Cape Frio and Rio Janeiro.—Latitude of the Cape 23° 1′ 14″ S., longitude 42° 3′ 40″ W., variation in its vicinity, 3° E.

We made Cape Frio on the afternoon of the 7th June, and were on its meridian at 8 P.M., about five miles to the southward. The above longitude is measured by the chronometers from Date Tree valley, Porto Praya, and is regarded as correct, because the three watches agreed very closely; and on subsequent trial at Rio, had varied but very little from the rate established at Porto Praya. The variation is by azimuth and amplitudes, taken this evening, when the ship's head was W.S.W.

The Cape is well known as one of the boldest and cleanest headlands in the world, high and remarkable in its outline, once seen easily recognized, readily made out from the views inserted in most of the current charts, and has regular soundings extending from it to a considerable distance. Yet because one or two unaccountable wrecks have taken place in its neighbourhood, it is frequently decried and dreaded as a formidable and dangerous promontory, instead of being regarded as it really is, a faithful and intelligible land-mark and monitor.

A lighthouse on the elevated part of Cape Frio would be a great acquisition to the navigation of this part of the Brazil coast, and the bank, from the Abrolhos southward, requires to be limited and sounded, which, with much facility might be accomplished by one of the small vessels on the station, and that it might be done effectually and skilfully, she should be detached for that express purpose; for the irregular pieces of information made in the course of a passage from port to port, are, in many cases, worse than useless.

After passing the meridian of Cape Frio, we stood on due west, until the fine light upon Raza Island was seen in the horizon at about twelve miles distance. The night was beautifully clear, and a fresh N.E. wind, and if time had been an object, we might have kept on, and carried the breeze right into the harbour; however we lay to, under easy sail for daylight, just keeping the light topping the horizon. In the course of the night the wind died away, and it fell calm, and continued so till near noon the next day.

Sunday, June 8th.—We were thoroughly disappointed in not receiving the customary sea breeze, and had nothing but light baffling winds all the P.M., so that it was past 8 before we came to an anchor off the city. We took up an outside and inconvenient berth, so remote from the places where the ship's business had to be transacted, as to create much loss of time. At anchor in 11 fathoms: the peak of the sugar loaf S ¼ E., flag-staff on Santa Cruz fort S.S.E. ½ E., and the flag-staff on the citadel on Cobras Island N.W.b.W. ¾ W.

Rio de Janeiro.—Lat. Rat Island 22° 52′ 4″ S., long. 2° 53′ 3″ variation on board 2¾, east head N.W.

Being bound for this harbour, and having rounded Raza Island at a short distance, bring the light to bear south per compass, and steer north for

the entrance; you will soon see the light on Fort Santa Cruz, and having neared it to a quarter of a mile or so, bring it open on the starboard bow, and having rounded the fort, which you must do within hail, you may haul in to the northward, and anchor within that fort, or you may proceed up the harbour, wind and tide permitting, in a N.N.W. direction, and take up your berth at pleasure.

The lights upon Raza and Santa Cruz render the entrance of Rio Janeiro nearly as easy by night as by day, but in consequence of the prevalence of land winds by night, which generally blow directly out of the harbour, it will perhaps be more prudent to anchor outside for the sea breeze in the morning; or if the ship is to be kept under sail, to remain at a convenient distance without Raza, when a bearing of the light will fix your position at any moment.

But the tides are to be particularly attended to, either entering or leaving this port; about the springs the ebb sets with considerable velocity towards the shoals of Fort d'Lago, all along the sugar-loaf side, and right upon the island Catanduba. And it is to be observed that a regular tide is not to be expected, the flood being repeatedly retarded, or even overpowered, and the ebb lengthened and increased in velocity to an extent that defies all calculation. When we were leaving the harbour, on the 25th June with a light land air from N.N.E., the Spartiate's and Satellite's boats, with those of two French frigates, and some of our own, were barely sufficient to tow us out clear of the Island Vilganhon, but after passing Lago, and drawing over on the Santa Cruz side, we got speedily and easily out, by keeping that side on board.

The directions contained in Horsburgh's book, and those given in the pamphlet by Messrs. Warner and Harris, compiled by Dessiou, which latter appears to have been extracted from the first, are so ample, and so excellent with respect to the chief features of the place, that anything we could add during our short stay might seem superfluous.

Baron Roussin, who lately surveyed the Brazil coast, places Vilganhon, (by means of sundry authorities,) in 43° 7′ 58″ W. Captain King measured the meridian distance from Plymouth to Vilganhon by fourteen chronometers, which places this island in 43° 05′ 03″ west of Greenwich.

From Rio Janeiro to Port Soledad, or Berkeley Sound.—After clearing the port of Rio, which place we sailed from on the 25th June, we received a fresh northerly wind; in about 30 hours it veered to W.N.W. and soon after to S.S.W., and for several days it continued flying about to various points, but generally favourable for our progress to the south.

On July 5th we reached to 40° 20′ S., and 49° 53′ W., and with winds of all moderate degrees of strength, had averaged 110 miles daily. There had been some little rain and haze, but the weather was generally fine and pleasant; every attention was paid to the discrepancy of dead reckoning and chronometric account.

We lost much time by presuming too much, and too early on the prevalence of westerly winds between the latitude of the Plata and the Falklands; with us, however, at this season, they prevailed from the eastward, and we would not, (more especially at this season,) advise any one to go upon the expectation of meeting any particular wind, but would recommend that as direct a line as possible should be preserved for the

east end of the island, (if bound to Port Soledad.) The accounts we have of wind and weather in this part of the ocean appear so vague and unsatisfactory, that small reliance can be placed upon them. For the generality of seamen take it for granted that what occurred to themselves, is what every one must meet with in the same place. And so it is with respect to the passsge round Cape Horn, because some ships in indifferent plight, and at a stormy season, have encountered bad weather, we have been therefore taught to believe that gales of wind are there severe and perpetual, accompanied by a sea overwhelming and terrific.

From the 5th July we drew fast to the southward, and we lost the fine weather and beautiful skies we had hitherto enjoyed, instead of which we had dense clouds, haze, and frequent rain, but no wind of any consequence before the 11th July, when some fresh gales commenced at E.S.E., with thick haze and rain, and at times strong squalls; also a high and uneasy swell, so that a smaller vessel would have found the sea very troublesome. But these gales subsided by the 13th, and from that day, (lat. 48° 5′ S., and long. 55½° W.) we were carried along by a seven knot breeze from the eastward, to the east Falkland Island, and were unusually favored by keeping that wind, with little variation, up to an anchorage in Berkeley Sound, about which time it entirely ceased, and fell calm for the night. We entered the Sound the 15th July, about 6h. 50m. P.M., and anchored at 8.

During this passage several days had elapsed in which no meridian altitude of the sun was observed, nor observations for time obtained from that luminary; yet sufficient opportunities, both evening and morning, occurred when stars could be readily taken with a well-defined horizon, so that we were never many hours without our place being accurately fixed; and as the south pole became more and more elevated, and as the circumpolar stars augmented, the means of doing so became more and more enlarged; for that part of the heavens was generally unclouded, and frequently beautifully transparent, even when the opposite hemisphere was enveloped in cloud.

The approach to the Falkland Islands is indicated by the lead to the distance of about 30 miles in the direction we made them, (from northward,) and on leaving the island we continued them with little interruption down to Staten Land, so as to render it presumptive that a bank connects those islands with the main land.

The entrance to Berkeley Sound may be distinguished by a peaked hill on the north side, and a smaller saddle peaked hill near it. The land on the south side is somewhat higher, the elevated part tapering or sloping rather abruptly, both northward and southward. But when in with the land, and especially being to the eastward, the opening or mouth of the sound is so distinct, as to render other marks unnecessary. Coming from the northward, before the entrance can be seen, remember that the land thereabout is the highest that will be observed to the southward.

Raper in his "*Practice of Navigation*," who has collected the most extensive series of maritime positions we have met with, gives the following for Cape Frio:—Lat. 22° 59′·9 S., lon. 41° 57′·2 W., and the summit, he says, is 1570 feet high. Again, with reference to Rat Island, which agrees in latitude tolerably with Raper, there is as much difference further west, (deducing Raper's

Rat Island from his Vilganhon,) as at Cape Frio; we believe Raper's are the acknowledged positions of these places.

An important letter will be found in our last number relating to Port William of the Falkland Islands, to which place the seat of Government has been removed from Berkeley Sound.—Ed. N.M.

Line of Battle Ships and Steam-Vessels.

The introduction of steam-power in vessels will become an era in navigation, and in a future war, the modes of action at sea will be increased and varied: perhaps, without argument, this will be readily admitted.

The facility with which steamers can alter their positions, advance or retreat at pleasure, will give them an advantage over other vessels, which have no other motive power than that produced by their sails; and not the least convenient points in this facility of altering position, are those of moving directly to windward, out of range of shot when the odds are against them, of escaping from a superior enemy, and otherwise, to chase a vessel directly in the wind's eye.

But I am of opinion that the consequences which these advantages are likely to afford to such a class of vessels during warfare, have been anticipatingly overrated; yet by no means do I condemn the discussions which have been entered into to show that the present state of sailing ships is one of inefficiency.

Another circumstance, not so remarkable indeed, but demanding great attention, (which, however, has been closely regarded,) is the great increase of size in cannon used on ship-board. The Paixham guns, introduced by the French, and which, from the accounts, appear to be terribly effective, we have been compelled to adopt; and their application to maritime warfare is also an innovation that will be attended with consequences unknown, at least to so great an extent, in former battles.

The Duke of Ragusa, Marshal Marmont, in his "Spirit of Military Institutions,"* has touched on the subject of steamers, and the effect that may be expected from the use of Paixham guns in vessels. As an experienced officer in warfare, although not a seaman, his words are worthy of being quoted.

He observes that "a thirty-six pound shot either traverses the epaulments of a land battery, or the sides of a ship, or lodges in the one or the other. But wherever it may be lodged, it occasions no great damage; and should it even perforate the side of a ship, the aperture which it makes is easily plugged; but a shot from a Paixham gun does much more execution. First, from its greater diameter and its reduced velocity it demolishes a greater extent of surface, and afterwards by bursting, makes an immense breach. If it strikes a battery it almost pulverises it, if a vessel, there is no possible means of saving her from sinking.

By such means, the defence of a fortified place would be almost raised to a par with the attack. Again, the employment of this arm will suppress the use of fleets, constituted as they now are, particularly three-

* A translation of which will be found in the U. S. Magazine, to which we *are indebted.*

deckers. In fact, the greater superiority of a line-of-battle ship over one of inferior size, is the result of two causes. The line-of-battle ship carries artillery, which the scantling of a frigate is unable to resist; while the calibre of the guns of a frigate produces no effect on its huge adversary: it is evident, therefore, that a frigate has no chance with a line-of-battle ship. While her fire can only take effect on the crew and rigging of the enemy, a single broadside may send her to the bottom."

Abstractedly considered this reasoning may be allowed, but I believe that in the annals of ocean warfare there are very few, if any, instances to exemplify the practical result which the Marshal assumes may take place. Circumstances must indeed be very disadvantageous to the ship of the line to induce a frigate to contend with her; for assuredly no Captain commanding a vessel of the latter class, would think of running alongside of a two-decker, under ordinary circumstances, with a view to her capture, single-handed. Considering the words as hypothetically given, I may add, that it is often in the power of a frigate to materially aid in the subjection, or destruction of a ship-of-the-line, and under adverse circumstances to engage her single-handed, as the naval events of the last war show. The Penelope's daring is a choice illustration of this; her fire was effective on the huge Guillaume Tell, until the Lion, and afterwards the Fondroyant came up and completed the conquest: the defence of the French Admiral was most noble. The Tartar and Æolus against the Duquesne is another admirable instance.

The Marshal goes on to say:—"From the day therefore that steamers, or even small sailing vessels, were armed with one or two guns, (Paixhams,) one single shot from which is sufficient to destroy the largest ship, from that moment it became absurd to construct line-of-battle ships, which not only cost 1,500,000 francs, but which have become useless. Ten small vessels, armed each with two heavy guns, by surrounding a line-of-battle ship, will soon give a good account of her. The Paixham guns will, therefore, ultimately render navies useless, constituted as they are at present."

Here we have a possible case given, to prove a general effect that is to be decisive in creating one of the greatest revolutions in navigation and warfare that could take place. I shall endeavour to show that the use of these large guns in small vessels, will not necessarily lead to the result contemplated by the gallant veteran. No one would dispute the probable consequences to a large ship, with guns of less calibre than those of an assailing force of smaller vessels in a calm. The instances are not numerous: in the Baltic the Danish gun-boats, with heavy guns, have displayed their successful effect in calm. Even armed as the two-deck ship was, in a commanding breeze, when close enough, she could play her part effectually; now, however, all have large guns; and it is not improbable that the principle of reducing the numbers according to the rate or class of the vessel, will be carried up even to the first-rates. I should not, indeed, be at all surprised to hear by and by, that instead of 100 guns, the three-deckers were armed with half that number of heavier guns. One of the main points that no doubt occupies attention, is a mode for counteracting the destructive effects of the Paixham shot, if *caoutchouc* enough could be procured, filling up a space (enlarged) between the outer and inner planks, it would perhaps lessen the shock, if it

did no more, and prevent splinters from committing very severe wounds. There is no denying, however, that the adoption of steam-vessels in warfare will alter the old system in general actions; and that consideration alone, without reference to the large guns is sufficient reason for the close attention which is given to the subject by the authorities; but it appears to me, as desirable, that our steam frigates should be constructed upon the principle of the bomb-vessel. I should like to see what resisting effect raw hides, a foot thick, would have on the large shot: probably they have been tried at Woolwich.

Although of the old school, it is not from prejudice that I do not fall into the new fancy, such as the veteran officer whom I have quoted, although that writer's reservation with reference to the present condition of large ships is not without force; perhaps he did not know, or forgot the probability of the Archimedean screw being applied to sailing ships as well as to steamers.

The new argument seems to be based upon the abstract fact that, as steamers can act without tide or wind materially affecting their purpose, and sailing vessels cannot, the latter must, necessarily, give place to the former. The advocates do not appear to consider that ships of the line carry guns equal in calibre, and which will drop a ball as far as any with which the steam-vessels of war are armed; consequently, although the latter, from their independent power, may choose their station and distance, they must come, let that station or position be where it may, within range of the shot of the line-of-battle ship, to make their own effective. Unless, therefore, it happened to be a calm, what would be the advantage of the steamer over the ship-of-the-line? "Ah!" say the advocates for a steam navy alone, "that is just the contingency that will give the steamer her superiority over the sailing vessel, and when there happens to be several steamers, a line-of-battle ship caught in a calm would be powerless, with these on her bow and stern." She would not be quite so, as she is provided with guns that fire in a line with the keel, ahead and astern, but her situation, I admit, would be rather a trying one; she has boats and sinewy arms, which would not be idle, and there is oftener a breeze than a calm; and as long as a ship is under command, with guns of equal calibre, she is a match for any steamer; and, indeed, the odds would be rather in her favour, whilst the steamer continued in action, because there is a contingency that may occur to her, that the sailing ship is free from,—a shot striking the wheel, or machinery, would paralyse the efforts of the steamer instantly; and as it would be the aim of the large ship to disable the other in her vitals, she would, of course, send her shot in the proper direction to effect that point. But the sailing ship may be struck between wind and water, and, of course, if the Paixham shot made such a hole as the Marshal adverts to, and he is correct in his statement that there would be no means of saving her from sinking, such would indeed be rather an awkward dilemma for her to be placed in; but then we must not forget that the steamer would be exposed to precisely the same chance of dropping down to the shades below.

Again, the steamer can engage end on, and by so doing she would present a limited body for the seamen gunners to aim it; what is the *amount of advantage* to be expected from this position: that nine shot

out of ten would miss her? Though that may be doubted I will grant it. Another, on the reverse: the ship-of-the-line would present her whole broadside length as a mark for the steamer's practice: granted too, but there is this redeeming feature as a balance: the steamer, end on, uses one or two guns, at most three or four; the sailing ship, six, eight, or ten, according to her armament, of Paixham's; these concentrate their fire to one focus—the bows of the steamer—and as our seamen are now expert gunners, if one shot out of ten, or even a greater number, alone hit the mark, the question would at once be settled; and, to use the words of the exalted author I have quoted, "a good account given of her."

It is also true that the steamer may fire broadside on, and in like manner concentrate her fire, so as to stave in planks enough, it may be, for a coach-and-six to pass through, in the sailing ship's side, but what is to prevent the latter from returning the compliment? An impartial reasoner's motto should ever be "*Audi alteram partem*," and to it I adhere; for playing upon the sounds of the dead lingo, to say "adieu," "alter 'em," or "part 'em," is to give up the argument, which I am not inclined to do. The line of battle ship may also be dismasted, which is the very worst thing, save the wind-and-water line shot, that could happen; but there is less chance, I think all will admit, of her being totally so, than that of the steamer's wheels or machinery being shattered, or with the screw steamer, of the latter being so.

I am free to confess, however, that in calms a steam fleet would have an advantage over a fleet of ships-of-the-line, by harassing its van and rear; but as eyes would be vigilant, the boats would be at work before the steamers came up, so as to spread the ships. This circumstance makes it pressingly advisable that some means should be devised for placing the two classes on a nearer equality. The screw has not yet been tried on the line-of-battle ship, but no doubt will, unless some other plan without the aid of steam, be discovered that will answer; for if we can only obtain a machine for turning a ship round* in any direction with celerity, she would then become more than a match in fight, though not in flight, for any steamer now afloat; for it is all moonshine to suppose, as some writers do, that a steamer may choose her distance out of range of a line-of-battle ship's guns, and so knock her in pieces, or cut her up in detail. Such is one of those abstract fancies of hasty reasoners, which lie in a vista of the imagination, as their view cannot be open to the right and left, or they would see that a ship of that class carries as large guns as a first-class steamer, if not larger; and that the shot will go as far, and commit as much havoc, and, consequently, can return favours with the same energy and force, and with equal grace. In any future war, no doubt fleets will be attended with steamers, instead of frigates, and they will be very useful auxiliaries, and a sad bore to the winged birds.

For coast service they will be excellent, and, certes, will find employ-

* Since this paper was written, I have read that the St. Lawrence, 46, is to be fitted with "Fullerton's Manœuvrer," yet did not know, but by conjecture, its use, until I saw it explained in the *Nautical Magazine* of this month. If the machine is exposed to shot, it will be objectionable: we require something that will work below the water-line, and when we can get such, armed with Paixham's, I opine a steamer would keep at a respectful distance from a ship-of-the-line.

ment enough with steam privateers; and in a fog, a sort of hunt-the-slipper pastime; but I entertain no idea that the services of able seamen will be dispensed with in them; nor do I think there will be the Roman galley work in fight, that some writers imagine: it does not appear to me likely to occur very often, the necessity would not be urgent, as a close engagement with heavy guns, would speedily settle the question, one way or other; for, though not vanquished in spirit, one, or both, may be damaged in means; and when it should come to the hand-to-hand struggle, there is no class equal to the Jacks for such work; that is a settled point.

It has been said that they should be manned with soldiers or marines principally, in a war: if the object be to kill as many of the enemy with small shot, as possible, by way of cutting the matter short, a company of riflemen would be the most likely instruments to effect such a purpose speedily. The idea is very terrible truly, and equally to be deplored, the necessity, (i.e. the wickedness,) for such legalised murders; however we must leave that consideration to the "Solitary Fly." The steamer may boast of her independent power, but the force of that moral renown earned by the liner, the prestige that awakened the world's jealousy, will still remain with her, and it is not steam, mighty agent as it is, that will vapourise it away.

If nothing can save a ship from the effects of Paixham's guns, what do we want with Captain Warner's projectile? The reported effect is so monstrous, that the best thing the authorities could do, after buying the secret, (only think of a civilized being selling such in the nineteenth century,) would be to follow the example of the ancient king, who, after paying for an invention, directly "tucked up" the inventor, that the rest of the world should remain in ignorance of the secret. Bnt it would seem, as in poisons, wherever there is a bane, there is an antidote: a patriot, Mr. George Jones, (Jack will be sure to lay him down as a relation of the celebrated Welch Neptune, David Jones,) has stepped forward, and *gratuitously* offered a plan for defeating the terrible effects of both projectiles.

To be serious, however: tactical rules will be necessary for steam fleets, which I dare say are preparing. The executive officers should all in rotation, serve a year or so in a steamer, in order that they may, at a moment's warning, be found equal to the charge of one of these vessels. Theoretical study is of use, but practical knowledge better, and the two combined, best.

AN OBSERVER.

A CHAT ABOUT THE WINDS.—*By Argonaut.*

ENGLAND is so dependent on her maritime commerce for the great figure she upholds among nations, and that commerce is so indebted to the winds of the ocean, notwithstanding the new power of steam, for its support, that I may be excused for spinning so long a yarn about them. It *must be* a subject especially interesting to the mariner, and is, therefore,

a theme that may profitably engage his cogitations during his leisure moments at sea.* Indeed this has been the case with several of the intelligent captains of trading ships, and the result springing from its observance, is a gradual, but certain increase of our knowledge: the still greatest auxiliary to the navigation of the ocean.

I have long wished to see a blank formula drawn up and printed, for the commanders of ships to fill up during their progressive course, independent of the ship's log, or the private journal, embracing the direction of the wind, the hourly state of the barometer and thermometer, the temperature of the surface water at 8 A.M., noon, 8 P.M., and at midnight: the hygrometric and electric states of the air, and the set of the current. In the ships of war such observations may be uninterruptedly carried on, but in the merchant service not generally.

The routine of the natural processes are perfect: effects are seen and felt, but causes, for the most part, are hid: observed phenomena are not always rightly interpreted, the senses are deceptive, and reason liable to error; hence learned men differ in conclusions drawn from the same facts. These checks to man's self love do not, however, lessen the thirst for knowledge, which is inherent in him.

I may appropriately speak first of the interchange of air from the equatorial region to the poles, and *vice versa*.

The philosophical explanation runs thus:—"From the solution of the general trade-winds, we may see the reason why, in the Atlantic ocean, a little this side of the thirtieth degree north, or thereabouts, there is generally a west or south-west wind: for as the inferior, (or lower) air within the limits of these winds, is constantly rushing towards the equator from the north-east point, or thereabout, the superior, (or upper) air moves the contrary way; and, therefore, after it has reached those limits, and meets with air that has little or no tendency to any one point more than to another, it will determine it to move in the same direction."

There is some ambiguity in this explanation, and a wrong impression is likely to be imbibed from the loose way in which it is worded. I profess not to understand how the upper, or "superior" air, moving to the north-east, can influence the lower air of the surface to stream to the south-west about the thirtieth degree north.

Observation has given reason for believing that a portion at least, if not the whole, of the upper air within the torrid zone does move to the northward and eastward; the clouds have been seen at times to move in those directions, and there are other evidences; but the question may be reasonably asked, whence the knowledge is derived, that fixes the disruption of this upper current of air about the thirtieth degree of latitude north. There are no proofs; if it be inferred from the trade wind being seasonally felt in that parallel, it cannot be supported, as that wind is caused by the sun's action on the earth's surface as it turns round; and not from the mixing the airs; which, however, may assist in its perpetuation. The majority of writers consider that the fall of this superior air takes place at the pole, and not in the assigned parallel; to admit which

* I should be glad of any comments on this paper from them, being satisfied that unless the subject is discussed, it will remain in the imperfect state it has hitherto been.

would be limiting the circulation of air to the middle portion of the earth.

It appears to me that the interchange of air has nothing to do with the cause of the trade winds, or their periodical changes, which are produced by other agency; with their variation of strength it has, apparently, although wind operates in creating a circulation of air.

Again, it is stated that the lower and denser air from the poles flows toward the equatorial regions, and there, following the apparent course of the sun, or points of greatest rarefaction, respectively on either side of the line, occasions the easterly winds of the torrid zone: and that the cause of the westerly winds in the higher latitudes is, from the superior air from the equator towards the poles having a motion contrary to the trade winds, and becoming condensed, descends to the surface, flowing from westward to eastward, to fill up the vacuum left by the trade wind.

This is the popular theory, a theory which, perhaps, may be considered as not very satisfactory. Without harping on the theory of "vacuum," it may be pronounced that the process of interchange of air is not the cause of the trade wind: there is no space empty, and of course none to be filled. Nor can it be correctly said that the torrid zone is supplied with fresh air through the direct flowing of the winds north of the tropic in the Atlantic: seamen are aware of this, whatever closet philosophers may think.

No doubt the air of the temperate zone is set in motion and ventilated by the winds, but the mixing of the extra and inter-tropical air, of the surface at least, is effected, excepting the norths, independently of wind: the process depending rather upon the difference of temperature in the higher latitudes and the line of the tropic; that difference being gradual from north to south, the exchange at the surface goes on with no violence, and, of course, is continued by the ascent of the rarified air, lower down towards the equator. If we are to understand the word "flows" in the popular theory, to mean that the air from the pole streams as wind into the tropics, it cannot be supported; as after passing Madeira, before entering the circle of the tropic wind, seamen generally experience a south-eastern breeze. I do not, myself, recollect an instance to the contrary, and across to the other side of the Atlantic, south-westerly winds prevail.

The design of the interchange of air, we may readily believe to be the prevention of disarrangement, and not to fill a vacuum that never happens; we may, therefore, figuratively consider it as one of nature's safety-valves.

The principle of an interchange of air, none, perhaps, will deny: but I think that many will object to the opinion as expressed in the theory, that the process is a cause of the trade winds; or that these winds are fed by wind. That the air within the torrid zone is constantly in a state of change, reason and reflection lead us to believe, by some natural process, independent of the perennial winds which blow therein: for these, alone, being confined to the central region of the earth, could not perfect such a system; there must, therefore, be other agencies at work for the accomplishment of the end: rarefaction and condensation appear to be the means, and in this, abstractedly, the theory is just.

The principle being admitted, what is to prevent the process from

being carried on vertically, instead of horizontally, over the whole globe, by a sort of aërial tide? What is meant by the air being purified? It is said to be the same everywhere: I do not speak of confined air, which may lose its vital principle, but the open atmosphere of the wide world. We may suppose,—perhaps do more,—assert, that for the healthy state of animal and vegetable life in free respiration, agitation of the air is absolutely necessary, hence wind.

If it should be insisted that the air from the equator to the poles, and *vice versa*, actually flows or streams, it is evident the latter must do so above the surface stratum of air, at least evident to seamen. In that way it is equally possible the process may be carried on, and if it could be proved, the popular theory would be more complete. One of the modern Athenians, (or Edinburgh Savans,) says that cold is showered down from the higher regions of the atmosphere, and does not commence at the earth's surface; be that as it may, we may be assured that if an interchange of air did not take place in some way or other, the torrid zone would be in that state which the ancients conjectured it was,—fit place for the Phœnix to hold dominion, and the Salamanders to revel; and the air in that furnace-like glow which it was supposed to be.

As it is, the effect of the process preserves the air in purity or freshness to a great and general extent; but there are auxiliaries to its complete perfection.

The periodical norths in the west, and the monsoons in the east, are active agencies; by these means fresh supplies of cool air are thrown into regions greatly heated by the sun's power. But these are not the only seasonal aids: there is another potent assistant, which arrives at that period of the year when the N.E. trade wind of the Atlantic flags,—the hurricane, "wrapp'd in its cloudy envelope;" and no more perfect process for agitating the air, and creating circulation upon the surface of the sea and the land, can be conceived, than the operation of these progressive meteors. The phenomenon is altogether a very wonderful one, and although observed for ages, how slow have been the advances towards a true knowledge of its action! We are indebted to science, and not to philosophy for its developement.

(*To be continued.*)

THE HURRICANE OF 1703.*

THE following extracts from a periodical work for the year 1834, give some farther particulars of this memorable storm; and, if we compare it's effects with those of subsequent gales that have passed over this island, it will appear to rank foremost among others that have been remarkable for severity.

"The most violent and destructive wind that was ever known in England, was on the 27th of November, 1703; it commenced three days before it arrived at his height: a strong west wind set in about the middle of the month, the force of which was increased every day till the 27th.

* See former accounts of this Hurricane in p. 174 and 276.

"Great damage was sustained, and much alarm excited both by sea and land. The late Rev. Dr. Stennett, in endeavouring to account for it, observes, that having most probably taken its rise in America, it made its way across the western ocean, and collecting confederate matter in its passage over the seas, spent its fury on those parts of the world whither this army of terrors was principally commissioned.

"The violence of the wind produced a hoarse dreadful noise, like one continued peal of thunder; whilst the excessive darkness of the night added to the horror of the scene. Some accounts say that it lightened, but it is probable that this apprehension arose from there being, at times, many meteors and vapours in the air; the hurry and agitation of nature being too great to admit of thunder and lightning in their usual course. Great loss of property was sustained, many painful accidents happened to those who escaped with their lives, and not a few had all their apprehensions realized, as they met death in some of its most dreadful forms.

"In the city of London and its vicinity, more than 800 dwelling-houses were laid in ruins, and above 2000 stacks of chimnies were precipitated to the ground. As a further proof of its strength and fury, we are informed that the lead which covered the roofs of 100 churches was rolled up, and hurled, in prodigious quantities to great distances.* But the dreadful devastation spread throughout the country: on one extensive plain, on the banks of the Severn, not less than 15,000 sheep, being unable to resist its violence, were driven into the river, and drowned.

"So great was the number of trees torn up by the roots, that a person anxious to ascertain it, had proceeded through but a part of Kent, when, arriving at the prodigious quantity of 250,000, he relinquished the undertaking!"

If the wind of this hurricane blew from S.W. to N.W., as stated in the last number of the *Nautical Magazine*, the meteor must have been moving, during its transit here, on a due east course. I will add here a curious circumstance, from another source to show that the hurricane is a breaker of the law with impunity, to the advantage of at least one nobleman.

By enactment it appears that "the trees of Blenheim are protected as heir-looms, as much as the house itself, or the glorious paintings. A Duke of Marlborough is not permitted to cut timber without the permission of certain trustees; consequently it must be proved, before this can be done, that the act will benefit the estate; and when one tree is felled, several, it is either six or ten, are planted to replace it."

The account goes on to say that "some idea of the quantity of timber on this magnificent estate may be formed from the fact that a few years ago, a single storm uprooted and shattered trees, the sale of which afterwards amounted to between £3000 and £4000. The hurricane may, therefore, be a welcome visitor occasionally, performing in a marvellously short time the levelling of the giants of the forest, and this without fee or reward. And, as we may suppose that the value of prostrated trees is carried to his Grace's account, he will not be among the number that

* The destruction occasioned by this, must have been nearly equal to the effect of cannon shot.

cry out against the mighty wind-agent; and as to the trustees, "they may catch the leveller if they can;" they hear him bellowing on all sides, but tangible he is not.

S. J.

NAUTICAL RAMBLES.—THE LEEWARD STATION DURING THE WAR.

Port Royal and its Associations.

(Continued from p. 365.)

As the instances are somewhat varied in their details, although bearing the same unaccountable influence which opinion maintained throughout, upon our fortunes, it may not be tiresome to the reader to follow us in our career, though we fear that a repetition of a succession of failures, will impress him with a notion that, we were a set of very undeserving fellows, whose perverse disposition deserved no greater success than it reaped. On my own part, it must appear obvious I can have nothing to extenuate, as, being a novice, it became me only to see and learn, (the failures by no means constituting the particular service a bad school,) and this, without presuming to express any thought which might obtrude itself into my mind, for or against the adopted plans of my superiors.* I must, however, repeat that, of the modes followed with intent to capture Spanish vessels, none originated or were approved by my messmate, Mizen; who, as I have stated, was on terms of intimacy with his commander, and, being an experienced seaman, was never slow in tendering his services; and upon particular occasions openly expressing his ideas, from zeal to the service, and regard for his captain. Failures, such as occurred to us, though we are in the habit of lamenting them, and very naturally too, are not, however, valueless, especially to the inexperienced if they possess a mind susceptible of improvement, and a disposition for instruction.

The subject is not indeed very inviting either to the narrator or to the reader; but, as the accounts may become of real use, they should not be withheld, from a feeling of delicacy; and, as the motive which dictates their appearance carries no sting, and names are suppressed, no wound can be, or is intended to be inflicted.

Whilst stretching to the north-westward from the main shore, during a fine night, we found ourselves rather unpleasantly near to the Albuquerques, or S.S.W. Cays, which lie about twenty miles from the island of St. Andrés. Mizen, who had the watch, was on the look-out for them, and we found just space enough to clear them, and no more. It was one of the nearest "touch and go" escapes I ever remember, but the thing was managed in the clever style of the self-confident seaman, with no more fuss than upon an ordinary occasion. The sleepers little dreamed how close they were to perdition!

The peculiar light reflected from the moon (which was occasionally clouded) upon the waves, as the spray arising from their action, rose up,

* Of course to them.

and passed in succession to leeward, had more than once deceived us into a belief that we saw the reef which is attached to those treacherous spots. The vigilant and experienced eye of the officer of the watch, soon, however, detected the deception, and we held on our course ; but, with that pre-caution, (every man being at his post in readiness to tack the vessel,) and cautious peering, which the careful officer never fails to exercise in cases of critical emergency. It was not long, however, before the roar of the breakers, and a black object, low, but lengthened out, told us there was not an instant to lose,—it was not lost,—the little brig spun round like a top, and as she gathered way, she got a lift from the rebound swell from the rocks, and sprang her luff, as if conscious of the too close proximity to danger. "That was a near go, Mizen," said I. "Oh ! its nothing when you are used to it, my boy !" Well, thought I, we may crack a joke *now*,—a minute, or two, affords time enough to create a revolution in the feelings ; so much influence has external circumstances over the mind of the incomprehensible being—man.

The following day we anchored under the high land, (elevated about three hundred feet above the sea-level) on the western coast of the island of Santa Andrés, not far from a little cove, indented in the narrow level tract below the hill, the southern margin of which is formed of a peculiar hard honey-combed rock. Except on the hill, which gradually slopes to the southward, and on which there are some buildings, and two remarkably tall cocoa-nut trees, the land appeared to be thickly covered with wood down to the south point. Our position was nearly abreast of a hut, close to the sea shore, with a grove of cocoa-nut trees to the left of it. We lay very close in, rather more so than was agreeable, considering the sharpness and metal-like nature of the rock which formed the margin of the shore.

Our mode of warfare with the dependencies of Spain, in this remote corner of the world, was very curious ; but, I think it was such as every feeling heart will admire for its benevolent and considerate spirit. It was far more honorable and humane in so great a power, which had become the master* of the ocean, than an unrelenting warfare carried on to the firesides of a poor inoffensive people, who never had, or could have a motive for such a contest, or a voice in the councils of their mother country.

The fact to which we allude is that, all those places which, either from disinclination, or a want of means, did not enter into the spirit of hostilities with us, were allowed to remain unmolested. In their helpless state it would be an absurdity to tax them with a want of patriotism.

We are now practising in some degree, the same moderate line of conduct towards the Chinese, but it has been said that self-interest, rather than benevolence controls those measures. We are, however, willing to hope and believe that that noble principle, in a great measure, actuates our conduct on the occasion.

The Governor, Don O'Neil, a Spaniard by birth, but evidently, as his name imports, the descendant of a "Patlander," came on board on a visit to the captain. Powers of fancy ! What an oddity ! Why, thought I, at the first glance, we have certainly lit upon the veritable Don him-

* "*Mistress*" is the word generally used, but we do not see a good reason *for it.*

self, the renowned knight of La Mancha! It was agreed by all that such a living curiosity never before presented itself on board of a man-of-war; and I am convinced that had all the artists of Europe searched every niche and corner of the habitable globe, to find a type of the famous Quixote of Romance, here in this little remote speck of the western world they would have found it! I do not think the officers, and probably the men too, ceased from laughter the whole day after the visit of the august Gobernador of St. Andrés. He passed a merry day on board, and was so exceedingly pleased with his entertainment that he threatened another, a second visit. In the evening he was conveyed on shore "quite happy." Verily, Sancho's proverb was verified in him:—"A good drinker is often found under a rusty cloak." And no doubt the old Borrachon, could he have found words, would have said with the squire:—"In sober truth—I never in my life drank out of malice—for sure, he must have a heart of marble who can refuse to pledge a friend!"

I went into the cove to examine the well, which is situated a little distance from the entrance on the left hand side, but found it empty. I then pulled up to the head of the inlet, which ends in a morass. The liquid there was of the consistency of pap, and in our intrusion, we disturbed the peaceful enjoyment of a school of large mullet, who began to flounder and spring out of the mud, in the greatest alarm. The cock-swain said, "Sure, sir, it would be easy to catch a boat-load of those fellows." Anything for amusement thought I, so out we jumped, and gave chase with the eagerness of thorough sportsmen. It was a most laughable sight; and though rather a novel, and not very cleanly pastime, we all enjoyed it amazingly. Our game, however, were so exceedingly nimble, and so slippery that, although many were seized that were two or three feet in length, all contrived to escape. After completely tiring ourselves, we got into the boat and went on board.

The men were so pleased with the sport, that, it furnished them and their messmates with a theme of merriment for some two or three days after. What trifles administer to our happiness! Strange that such a simple, and even ludicrous incident should have the effect of creating good humour for at least forty or sixty hours after its occurrence. It, however, shows how easily sailors may be diverted, and kept from feeling, unmitigated, the pressure of that rigid restraint necessarily imposed upon their free-will. I hate—no, I do not like that word,—well then, I dislike, inveterately dislike, your stiff, formal, implacable disciplinarian, who fancies that to unbend himself, or relax in the slightest degree the reins, is, to lessen *his* authority. What is the object of his life? "To enjoy and be happy." Can *he* fulfil it? Is there no avarice in power, as in grief? Is there no possibility of insuring much of our own happiness by administering to that of others of our kind? It were a dreaded service, in sooth, did the majority of the officers think so, and act up to the motive.

Apropos, of catching the finny tribes, I believe we have not in our language a large work like the "Traite des Pesches," of our neighbours, which gives an account of oceanic fishing in all its various branches. We possess many indefatigable Izaak Waltons, who have dwelt with minuteness on the most approved modes of angling for fresh-water fishes; but, not one who has written a treatise on the sea fisheries, that we are

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and, indeed, uncommon sight, to see the boat rushing through the water at a great rate, without any visible agent to effect it. Those who were ignorant of the circumstance, were, for a moment or two, puzzled to account for the means, or for what purpose their respected commander had placed himself in such a dilemma. One of the cutters was lowered, and sent to the rescue; on arriving up to the fugitive, they found him, as, indeed, he generally was, as calm and sedate as a judge on the bench. Although the stern of the tiny boat was drawn down within an inch or two of the water, (which, fortunately, was quite smooth,) the indefatigable sportsman would by no means be interfered with, but continued with wonderful patience to play his game, until it floated lifeless. The distance the shark had towed the boats was about two miles. "Jam Satis," perhaps the reader will exclaim, and "Now, Master Toggle, for the promised chase if you please."

Well, we remained at the anchorage at St. Andrés two or three days, watering, (near the north end,) wooding, and procuring stock. For the latter purpose the Purser was sent, with a party, to cross the island to the eastern side. Whilst the parties were away, a sail was descried to the westward, looking up for the island; at noon she was sufficiently near for her rig to be made out: she was a "rakish" schooner. The glasses were all directed to her, and as she approached, the opinionists, for once, were unanimous that she was a privateer. "Huzza! it is a glorious chance, how can she escape?" said the confident. "Our experience may serve us now, if we rightly apply it," answered the prudent, but still doubting voice. "Get all ready for slipping," cried the Captain, as he removed the glass from his eye. "Let her come on quietly, Sir, she evidently takes us for a trader, do not undeceive her, but let her approach sufficiently close to find out the mistake herself; then slip, and she will be yours:" so said Mizen to his friendly commander. So eager and so certain of success were the majority, that it was thought absolutely a waste of precious time to hold on until the approaching vessel should come so near as to ascertain that we were a man-of-war. Well, the cable ran out, and away we went, with a fine top-gallant breeze. Almost simultaneously the schooner was round! and now for the grand tug,—a "stern chase." When speed is nearly equal, it is the worst position a chaser can fall into; and if there had been any doubt about the matter, our race this day would have confirmed it. Mizen was influenced in a great measure, no doubt, by this consideration, in the advice he took the liberty of tendering; for it has long been an axiom among seamen, that "a stern chase is always a long one."

The excitement, the fine weather, the fluctuating hopes and fears, as the brig gained, or the schooner receded, conspired to make it a very delightful pursuit, at least to the young; and I believe to the more staid lookers-on also; but I thought my friend Mizen did not seem to enter into these feelings. "What will you take for your prize-money?" said I addressing him: "Ah! Toggle, my lad, you won't cover your mess expenses this cruise, do not flatter yourself!" "Then you don't think we shall catch her?" He laughed, and looked quite as explicitly as if he had said "I pity your inexperience." Time sped on, and the sun drew near the horizon as the schooner bore round off for the Corn Islands, which we had by this time approached within a few miles. At 6 P.M., our fu-

gitive fired a gun, and ran up the tri-color, and very shortly after dropped out of sight, under one of the islands; precisely in the same way that our former friend, (perhaps identical,) tricked us, off San Blas. I do not know if the gun was intended as a brag, or was "*pour l'honneur du pavillion*;" but, notwithstanding a forced smile, there was not one of us in very good humour, as the mast-headman reported "white water ahead." "Ready about, about she goes, where is St. Andrés? We have just been four and a half hours running from it: We shall be there to morrow, I suppose, Pilot?" (for we had carried him away with us) said I. "Whee! disparate, you get up in five day, you may think yourself well off." It was nearly, if not quite, a week before we anchored again in our former berth.

The spirits of the parties left behind were kept buoyant with the expectation of our re-appearance with a prize; day after day they paid a visit to Cocoa-nut hill, and strained their eyes in vain along the western horizon, with the hope of espying their lost vessel. Doubts, at last, began to rise up in their minds for her safety; for, being strangers to navigation, they, of course, did not consider that only a few hours run to leeward, would cause days of toil to bring the vessel back to her starting-place. It was, therefore, with much delight they beheld the brig when she did appear, standing in her former anchorage, although alone.

With the moody feelings of disappointed hopes, the beat up against a fresh breeze, (which, certes, stood us in need,) and a brisk westerly current, (a sad, sad drawback indeed,) was tedious and disagreeable in the extreme. It is the predominant inclination of man, when his hopes have been thwarted, especially by his own folly, to be out of humour with himself, and usually with every body, and every thing around him. These common feelings of our nature, humiliating though they be, it may be supposed we were not altogether free from; but there is equally a disposition, except in the morose few, to rally, and shake off gloomy thoughts, which shadow the better sense, and darken all around, like the sombre *nimbi* that encompass the mountain's brow! A few hours of activity served, therefore, to wean us from such an unpleasant state; and we as naturally returned to our accustomed agreeable mode of existence, as if nothing had occurred to mar it; for there was as little to complain of, with respect to treatment, either by officer or seaman, as in any vessel I ever sailed in.

Old "Soundings" on the fourth or fifth day began to be very fidgety about his longitude; there being no chronometer, nor lunarian on board. Whether we were to the westward or to the eastward of St. Andrés was to him, as to others, a matter of extreme doubt; for, in stretching to the southward we might have got into the counter-current, and been swept away to the eastward. It was hardly within probability that an unlettered man like the pilot could pretend to knowledge not possessed by our experienced ci-devant free-trader; but, upon application, rather reluctantly made, it was found, that although unskilled in "days' works," he was quite easy about the matter, having determined the fact twice, daily, as we plodded our weary way through the trackless deep. There was something mysterious in this—our superstitious Maestro was on nettles at this discovery. He could not conceive how it was possible that a half-black Creole-Spaniard, could confidently solve a

problem which, with the amount of science he was in the happy possession of, he was utterly unable to determine; for he dreamed not—

"'Twere never meant that science should engross
All philosophy. The simplest things on earth
From the huge mammoth to the tiny moss,
All, all are comprehended within its girth.
And the simple man, by simple mean,
A useful lesson gives to learned sages:
For nature's book by all alike is seen,
There is no exclusion from its pages."

But it does happen in many cases, that, those who have attained to some knowledge, look down with contempt on more humble learners. Weather it was exactly so, or from a reasonable doubt, with our knight of the quadrant, I will not hazard a conjecture; but I am quite certain that as far as his knowledge (or that, indeed, of anybody else, except our porto-guido, who might now, with propriety, be termed the "piloto de altura,") of our exact position with reference to the island we were bound to, went, his peg might have been dropped somewhat lower than that upon which the old simple Andrean hung his professional reputation. I do not say this out of reproach, because, at the time, lunarians were not so common as at present, and it was a rarity to find a time-keeper in a small brig.

Being a wonderfully inquisitive fellow, with reference to any, and every thing relating to the ocean, I questioned our wise man of the island, as to the *why* he was so confident of our being to the westward of it. I was the more eager to dive into the old man's secret, I confess, not from any superstitious motive, such as seemed to haunt the scientific Master, Log; but because I was fairly puzzled to account for his words, that, by a sign seen in the morn and eve, he knew for a truth, that which he had asserted. Experience, and a habit of practical observation, universal among persons of his calling, no doubt were the means by which he had acquired so useful a point of knowledge. Although he did not proclaim it aloud, yet I do not think he desired to monopolize it to himself, for he, at first, explained the circumstance to the captain, who probably, from two or three days' observation was satisfied of its correctness, and, therefore, felt quite easy; but it is clear, to have become so, he must have placed implicit confidence in the old man's assertion—the result of our traverse verified it; and hence it may become of use to others. Having manœuvred a little, and enticed the old boy "into a line," I obtained the secret. It appears that the gulls and other aquatics are never seen to the eastward of St. Andrés, further than the E.S.E. cays, about fifteen miles in the direction implied; except, perhaps, now and then, a stray bird. In the *morning* to the westward, these birds are seen flying to the *eastward;* and the *evening* invariably *westerly.* Hence, by this simple observation, he could always tell correctly whether he was westward, or eastward, of the island.

(To be continued.)

Notice of the City and Commerce of Shanghai.

(Continued from p. 369.)

The vessels arriving from Singapore, Malacca, Penang, Java, Jolo, Sumatra, Borneo, &c., and which are entered at the custom house as coming from Fuh-kien or Canton, bring European goods of all kinds; opium, flints, pepper, sharks' fins, deers' horns, cochineal, hides, nails, nutmegs, liquid and dried indigo, biche de mar, birds' nests, mother o'pearl, shells, tortoise shells, ivory, buffalos' humps, sugar, canes, betel nut, sapan wood, ebony, iron, lead, gold thread, and all kinds of wood for spars, ornamental and fragrant, as well as materials for dying, and medicine coming from the Red Sea, the Persian or Indian, and the isles of Polynesia.

The ships of the north, that is, those which return to Quantung, Shensing, and Leatong, carry away cotton, some tea, paper, silks, and cotton stuffs from Nanking and Suchan; European goods and flints, opium, and a great part of the sugar, pepper, bicho de mar, and birds' nests, &c., which the vessels passing under the name of Fuhkien and Canton, bring to Shanghai. Some of them, however, return in ballast.

These last mentioned vessels return with cargoes of cotton, earthenware, and porcelain, (especially for Formosa,) salted pork, green tea, raw and manufactured silks, native cotton cloth, blankets, hemp, dried pulse of various kinds, fruits, and part of the goods brought by the vessels from the north.

There is besides an interchange of a vast number of articles connected with the coasting trade, such as baskets, shoes, charcoal, and coal, wood, straw, pipes, tobacco, gypsum, varnish, umbrellas, mats, lanterns, sacks, sponges, fruits, vegetables, &c.

There come besides to Shanghai by the Yang-tze-kiang and its branches, vessels from various ports, amounting in all to 5,400 annually. These never put out to sea, but convey into the interior the goods brought by vessels from the south and the north, as well as transport from the interior the goods to be despatched by these vessels. In addition to the vessels employed in the inland navigation, and those which go to sea, amounting, as has been shown, to 7,000, there are, at Shanghai, innumerable boats and barges employed in fishing, and in conveying passengers and goods.

It may be inferred from the foregoing description, that Shanghai is not only a point of great trade in imports and exports, but also an emporium where there is an exchange of national and foreign commodities between the southern and northern parts of the empire.

It would be an object of great interest to form a complete statement of the imports and exports, but whether it is that they are unwilling to communicate their information, or that they really have none, and I rather believe the latter) I found all the Europeans with whom I was acquainted at Shanghai completely ignorant of this matter; and, so much so that all assured me there came to that port at the least 5,000 vessels annually, solely because this number could be counted in it, and *even more*. But we have seen already that the greater part are only the

means of transport into the interior, instead of the carts and mules employed in other countries, or lands less favoured by nature than Shanghai. My application to the Europeans being unavailing, I might have turned myself to the rich native merchants, and even the vessels anchored in the river, but this required amongst other matters, a knowledge of the language of Shanghai, and of the innumerable dialects which are spoken by the seamen and merchants who come thither. For such an undertaking I found myself very ill prepared; in Manila and Canton I used much diligence in vain to find some fit Chinaman who would follow me and act as interpreter. At Macao even, I had difficulty in finding a servant, amongst those there who speak a kind of English and Portuguese, which it is necessary to study before you can understand it, but in Shanghai he was scarcely of any use to me, knowing no other dialect than that of Canton. Another whom I took into my service in the former city, although he understood a little more of the idioms of the country, was equally useless to me, because I understood him very imperfectly. I could, therefore, only avail myself of the little which I could speak of the Mandarin dialect of Nanking, (the language called the Mandarin, varies not only between different provinces and cities, but even between the interior and suburbs of the same city;) but it was impossible with such feeble aid to keep myself afloat in this sea of difficulties. Another resource was left me, and it was to make application to the custom house, but I would have been a simpleton to expect to gain information from the chief men there. Therefore it was by artful means, and putting in operation resources which rarely fail of their effect in China, I found access indirectly to a kind of register or cash-book, in which was set down daily the quantities entered for duties received on goods imported. But this book not having tables or sums, it was necessary in each article to extract page by page the particular quantities, to form a calculation of the whole sum. And as this was a tedious process, and I feared, consequently, to cause trouble, I was content to gain the notices I wished for, regarding articles of importance to the commerce of Manila. I found the result that there are yearly imported into Shanghai 520,000 peculs of sugar, from 25 to 30,000 of sapan wood, an equal quantity of dye stuffs, from 3 to 4,000 of canes, 1,950 of bicho de mar, 1,700 of shark's fins, and 1,500 of nests. This last article is probably introduced in greater quantity than is entered, because the first quality pays five taels of duty at the custom-house, which must be a temptation to the dealers, and those engaged in the office. A rich merchant from Fuhkien assured me that from 3 to 4,000 piculs of bicho de mar are imported, although those entered do not amount to 2,000. The same amount of fraud is probably committed in shark's fins. Dye stuffs pay a duty of 4 mace per pecul, sapan wood 1, shark's fins 1 tael 5 mace, bicho de mar 8 mace, sugar 100 cash.

All the duties received at this custom-house on Chinese vessels produce a little more than 100,000 dollars, of which only 80,000 enter the Imperial treasury.

There is, however, considerable confusion in the money weights and measures of Shanghai. Money transactions are effected in pieces of silver called Sycee, in Spanish dollars of Carolus and of Ferdinand. Silver is reckoned by taels, 720 taels are equal to 100 dollars of Ferdinand.

But these dollars are here almost nominal, since those current at Shanghai are of Carolus, and bear to the others a premium of from 5 to 15 per cent. At the time of writing this notice the respective value of dollars was in the following proportion: 100 pure Mexican Spanish, 95 stamped of Carolus, or Ferdinand 93. Sycee is not all of equal value; some is in large pieces of the form of a Chinese shoe, and of the weight of 50 taels, others are in small bits, of various figures and weights, each of which has its own denomination, and they are received at different discounts. The first or large size is current at Shanghai, and is at a premium of 3 to 4 per cent. above Spanish dollars, that is above the rate of 720 taels to 1,000 dollars. At this moment one tael of such silver is equal to 1,720 cash, one Carolus dollar to 1,280.

The measure is the *chi* equal to 15 inches 2 lines of the foot of Burgos, and 4 per cent shorter than *pan* of Canton. The *chan* is also used, which is equal to ten *chi*.

The weights are the pecul (*tan*) and catty (*kin*.) The Chinese merchants in their purchases and sales of sugar, and some other articles, make the catty equal to 14 taels 4 mace: from which it follows that the pecul only weighs 90 catties at 16 taels; or else they make it of 18½, in which case 100 are equal to 116. The first weight they call *shui kwang tsing*, and the second *lai yun seng*. Besides these they have the *foto sing* or *tsao ping*, the catty of which is of 16 taels, the *sima ping* of 17, the *kin in pin* of 15 taels 3 mace, and the *wu li shui kwantsing*, or *shui kwan tsing* of 12 taels 8 mace. Whereas the pecul of rice contains 160 catties, of wheat 140, of barley 120, of flour 100. Thus as they make the catties larger or smaller, counting them at the rate of from 14½ to 18½ taels, also they have taels of two or three kinds; example, 19 taels of the *sima ping* are equal to 20 of the *shui kwan* that is to say, the weights come to be conventional: but Europeans require for piculs of 100 catties, at the custom-house of Shanghai, the same as that of Canton. This however does not prevent a long enquiries of the natives, in order to gain commercial information being minded.

[illegible] is an additional native of the Tsze mentioned in the [illegible] as coming from the north. There was presented to the [illegible] and Horticultural Society of India:—

[illegible] assortment of Chinese seeds consisting of [illegible] nine. —Presented by [illegible] Esq. a native of Cega. *H.*

[illegible] forwarding these seeds [illegible] makes the remarks as appear to me [illegible]

[illegible] the large white [illegible] this country, as the staple of the [illegible] Shanghai [illegible] the annual [illegible] of 2½ millions of [illegible] of the [illegible] of sterling. [illegible] the [illegible] to the [illegible] Shanghai [illegible] from [illegible] to [illegible] Canton [illegible] Ningpo. The [illegible] [illegible] [illegible]

or small grindstones in circular shape, is distributed about China in every direction, both as food for pigs and buffaloes, as also for manure.—*Honkgong Register.*

(*To be continued.*)

Harbour of Refuge at St. Michaels.

The advantage of a Refuge Harbour at St. Michaels, for ships in distress, however small, would be no less acknowledged by the owners of the local coasting craft, than of merchant ships generally, in their voyages across the Atlantic. The Azores have been the occasional resort of shipping, (and the different islands of the group visited, according as wind and weather permitted,) to whose leaky state even the temporary shelter of high land, where a few repairs could be made, was an object of the utmost importance. But the proportion which the number of such ships has borne to the vast traffic of the central Atlantic, is so much smaller than the average number ascertained by the Books of Insurers to be in distress, that it can scarcely be doubted that, whenever they would be kept afloat by the labour of their crews, the masters have preferred the prosecution of their voyage with uncertainty of the consequences of further bad weather, to the risk of being caught on a lee shore in one of the open ports of the Azores. And, it is not surprising that the greater part of the ships which have sought shelter in the islands have been wrecked there, or condemned and broken up.

The chief town of St. Michaels had for many years possessed a little basin of about two acres area, which having an easy entrance of one hundred feet width, and eight or ten feet depth of water, had been used as a repairing dock, and a shelter by ships of small draft, or larger ones which had been lightened. But an extraordinary rise of water in December 1839, accompanied by a southerly gale of wind, broke down the massive seaward wall, and filled half the basin with sand and stones. As this accident put a stop to the winter trade of the coasters, great exertions were made by parties most concerned to effect the re-construction of the wall, and the clearing of the basin. An estimate was made and subscriptions set on foot for the purpose, but after several fruitless appeals to the patriotism of the wealthy inhabitants, and attempts to enlist the aid of Government effectually towards its attainment, the project was virtually abandoned. It has now been resumed by the Acting Governor of the district, and the work of repair commenced, the dimensions of the old basin being somewhat enlarged.

The pier will be constructed of dovetailed cut stone of ten yards breadth, having a deep foundation in a narrow reef of rocks, which separated a great part of the basin from the sea. The building stone and foundation reef are both of a hard heavy and compact lava, and promise the greatest strength and durability to the work. The area of the basin when finished will be about eleven square yards, with an uniform depth of water of fifteen feet, and capable of holding, with room to prevent collision, twenty vessels of two hundred tons burthen.

The entrance will be forty yards wide, and its diameter, at right angles with a line pointing to the S.E., so that a vessel running for the basin with a S.W. wind, the only ordinary bad wind of the port, will

have it directly on the beam, which will lessen her lee way, making her steer more easy, and facilitate her admission into the basin. In this way vessels ran for the old basin, and got safely in; and, as the entrance of the new will be wider, the point of the pier thrown more to seaward, and buoys and rings placed in situations proper for warping, the facilities for running into the basin in bad weather, and hauling in, in good, will be greater than formerly.

The work having been commenced, and twelve of the 120 yards of the pier's length constructed, it may be hoped that no delays will meet its accomplishment. The present estimate of the whole cost is £3,000, of which, that of the pier, judging from the actual outlay on the part finished, will be £2,200. The deepening it is computed will cost £900, and the facing of the internal parts and other contingencies, will, perhaps be £500, and it may, therefore, be expected that the estimate will not be exceeded by more than £500 or £600.

To meet this demand, for £3,600, private subscriptions will be made to the amount, probably, of £600. A sum of £540 annually set aside from the local revenues for public works, will be taken from the receipts of the present year, and the remainder, the Portuguese government will be required to grant, out of the surplus local revenues.

On the last resource depends the completion of the basin, but as the means are not wanting, and it is the interest of the government to forward the work, no doubt is entertained that it will not be delayed.

With respect to the ability to make the required grant, I need only state that the average annual revenue and expenditure of St. Michaels are as stated in the following table, and that there is an annual surplus of £11,400 at the disposal of the government.

Receipts.		Expenditure.	
Customs	£10,000	Internal Government	£2,000
Tithes	14,000	Marine	400
Conventual Properties	7,000	Church and Justice	9,000
Tax on Wine and Meat	1,000	Finance	2,000
Ditto on Transfer of Property	1,800	Military	10,000
Other sources	1,000	Surplus	11,400
	£34,800		£34,800

The interest with which the Portuguese government must regard the work, rests generally on its utility to the internal commerce of the Azores, its probable encouragement of a foreign trade, and their desire to promote the welfare of one of the most wealthy, peaceable, and loyal provinces belonging to the crown.

As a political party the present ministry may be glad to seize an occasion which has hitherto been neglected, of conferring a great benefit, at no sacrifice, on this part of the empire, and of thus rendering their administration popular, and giving force to their organs in this island. In a community necessarily small, where the total population does not exceed 80,000 persons, and the nearly equally divided ministerial and anti-ministerial parties must reinforce their influence by appeals to public interests, it is useful to possess, on the eve of the approaching general *parliamentary* election, the present opportunity of doing good; and it is

not likely that it will be thrown away. The influence of the ministerial party has been much benefitted, by the residence here of the present acting governor, Mr. Continho de Albergario, who came here last year as secretary for the district, and now acts in the higher capacity during the absence of the governor, a deputy in the Cortes.

His energy, ability, and zeal for the public good have been more than once strikingly exemplified; and as the author, and active promoter of the plan now carrying out, for making the new basin, he affords to the district another proof of the judicious selection made by the ministry, and another recommendation of their general policy.

Although this reasoning more entirely regards local interests, it has a direct reference to those of British trade. Without the aid of the Portuguese Government the basin will not be completed, and the traffic of British shipping in those seas is too considerable not to make this small basin an object of some importance to British mariners and merchants. Taking the average number of British ships bound outwards to, and homewards from, ports lying between Charleston in North, and Buenos Ayres in South America, and those bound homewards from ports round the Capes of Good Hope and Horn, there are about 7,500 ships with 90,000 seamen, and cargoes of the value of £55,000,000 annually, passing near the Azores. Many of these ships are of too great draught of water for the basin, which will not be deepened to more than 15 feet, the general depth at low water outside; but for vessels of this draught or less, it will be a safe harbour of refuge, and its completion will remove the ground of the long standing complaint, that there is no safe port for repairs between the West Indies and the British Channel.

British Consulate, St. Michaels,
February 24th, 1845.

THE MERCHANT SERVICE.

I HAVE been led to offer a few remarks on the Merchant Service, knowing that you and your readers are much interested in this important subject.

We cannot reasonably expect that the officers generally of the Merchant Service will be either talented or respectable, until they are better remunerated for their arduous duties, and a change for the better is established in the laws relating thereto. Boys who have received a liberal education, have a decided aversion to the way in which they are restrained to live,—in dark forecastles, with illiterate men, and forgetting thereby politeness, and a regularity of habit and character previously acquired.

Many have an unsubdued craving for a sailor's life, and will not on any account believe that the privations to be endured afloat are half so severe as represented by those of long experience. Generally young, they cannot be expected to take into consideration the prospects which are before them, whether or not there is a possibility of ever arriving at the head of their profession, or whether, if they become good seamen, there is any hope of their being commanders of vessels, in which they can be interested, or in which they are only appointed, with a monthly salary.

Numbers there are, discontented with their pursuits on shore, and knowing little of the hardships, and the unpleasant duties to be performed, in opposition to their refined ideas, resolve to launch on the ocean. There are others who enter on board London East India ships, as midshipmen, and, paying a premium, do not undergo the same treatment as apprentices, being considered young gentlemen; when spoken to by the crew, Mr. is prefixed to their names, as well as other marks of respect. A berth is appropriated to them in the after steerage, and they are consigned to the care of the third and fourth officers: in short, generally these youngsters are expected to occupy the station of mates, and in a few years assume command of the mercantile fleets of Great Britain. All of these, except midshipmen, are so admirably treated upon in the three last numbers of the *Nautical*, that it would be presumption attempting a clearer elucidation of the subject.

It is generally considered that ship-owners acquire more wealth if they pay low salaries, and are as economical as possible in sailing their vessels. This being the case, men of talent and experience, who would exert themselves in the cause of seamen, and be the admiration of the Merchant Service, are compelled, after a few years, to resign their command, and to seek a subsistence in pursuits which will easily obtain a better reward, and afford better means for the support of their families. Very many in the prime of life thus leave their profession, who, by an increase of their salaries, would much rather continue in command; at the same time would instruct and discipline their crews in a manner which would render seamen worthy of the name, and also impress upon them a spirit of affection, instead of the too frequent and vulgar manner of compelling instant obedience by taking the Lord's name in vain. From the foregoing cause, it appears that the Merchant Service is deprived of men, valuable to that service from conducting their ships in such an exemplary manner, as to let the crews feel that they are interested in the welfare of those under command. Illiterate, unsteady, and inexperienced men, are now too often appointed to command, so that misery to families, mutiny, and shipwreck, are the awful and heart-rending results.

To show the little regard which some owners evince to their captains, I will narrate an instance which lately transpired in one of the principal ports of Great Britain. The owner having a friend more experienced in maritime affairs than he was, requested him to obtain a master who could be entrusted to cross the Atlantic, in a fine vessel of about 600 tons. In conformity with the owner's wish, his friend was the means of appointing a person, who, eight years previous had served as chief mate in a respectable employ, since which he had been sailing from other ports in England, unknown and forgotten by many of his former patrons. A man of thought and judgment would naturally make inquiries from the man's late employers concerning his character, &c., &c.; being satisfied under that head, he might be chosen commander with far more credit to himself, and satisfaction on the part of the owner. This was not the prudent course pursued by the owner's friend: knowing that the person he recommended was considered, eight years before, suitable for a commander, and had occupied that station for some time, the owner's assistant did not consider it essential to enquire about his conduct from many sources *where his transactions* could have been easily ascertained. The before-

mentioned assistant, delighted at the prospect of introducing a man to the owner's notice, good looking, and at first sight respectable, rashly presented him to the owner. To all appearance being a man of sober and peaceable habits, the owner is much gratified, and without attempting to obtain accurate information of his past conduct, resolved appointing him commander.

The new master is sober during the day, until the ship is nearly ready for sea. He is then to be seen, even before ten o'clock in the morning, pacing the deck with a stately air, scarcely able to transact his affairs; the traits of inebriety are distinctly visible in his countenance. Now a man studying his own welfare, the interest of society, the respectability of his vessels, and the Merchant Service generally, would, without hesitation, have discharged this person from his employ. Such were not the prudent views of the ship-owner. Disreputable to those concerned, the man, known as an inveterate drunkard, was still permitted to retain his command. An hour before sailing the vessel was at the dock-gates, but the captain is not on board; the pilot receives orders from the owner's assistant, to bring the ship to anchor in the river, because there is no master. When the ship is about to be brought to an anchor, the captain, overcome by excessive intoxication, made his appearance on board with the steward, and had a minute's conversation with the pilot. A steamer is immediately hailed, the ship is soon under tow, proceeding to sea as expeditiously as possible. It afterwards appeared that the master when going on board with the broker's clerk, was met by the owner, who asked the clerk for the papers, to see if all was right, and acquainting the captain that he was discharged, proceeded with his friend in quest of another commander.

In the mean time, the dismissed master took advantage of the owner's absence, went on board, and ordered the pilot to proceed to sea, but by some means, about half an hour afterwards, news was conveyed to the owner, that the captain was running away with the ship. Accordingly he sent a small boat after the ship, but perceiving that this was of no avail, pursued her in a powerful steamer. In the course of two hours the steamer was alongside of her prize, her helm is put down, she is soon under the guidance of the pursuer, and towed to her intended anchorage in the river. The former captain was so intoxicated that he could not interfere in the matter; and he was on board an hour after the ship was brought to an anchor, carousing as long as any porter could be procured.

From this it is apparent that a master was chosen who might be qualified for command in some points; at the same time, his insatiable craving after intoxicating liquors, caused him to be rejected as a person not adequate to fulfil the heavy responsibilities of a ship-master. For this all officers should be well prepared, before they undertake that important station, when property, and the lives of fellow creatures are alike exposed to the fury of the elements, frequent insobriety and incompetent judgment.

This alone is sufficient to exemplify to all interested in the election of commanders, that, whatever men have been some years previous, it is also requisite to enquire what they are at present, so that their confidence may be relied upon, and not, what is too often the case, trusting to good luck in their appointments.

This owner did not thus wisely resolve for the future to select his commanders. In perplexity, again relying on his former friend, a man is appointed entirely through his medium, and the ship sails with her new captain, 24 hours after the discharged master had vainly attempted commencing a passage across the Atlantic without the ship's papers. It is absurd to suppose that a man could be elected commander in so short a period, without being fully aware that he was occupying a station for which, on the onset he was not adequate.

Had the steamer been detained an hour longer on the day previous, the runaway ship would have been in such a position that the steamer could not have reached her. It is superfluous for me to represent the difficulties to be overcome, had this ship spoken a man-of-war, or when she arrived in a distant clime. Suffice it to say, that similar examples ought to be the guidance of owners in the selection of their officers, if they are ever desirous that their ships and crews should excel in all good qualities, and be the pride and admiration of the world.

Such, I am fearful, at present, are not the aspiring views of the English ship-owners; with vessels well insured, hearts indurated by the continual repetition of the awful calamities annually befalling so many of our merchant vessels, their exclusive attention is directed towards the most efficient means of acquiring wealth; and not studying the interest of the kind-hearted, and much neglected officers and seamen, by whose indefatigable exertions they derive so many earthly advantages.

AN OBSERVER.

(*To be continued.*)

[We heard the other day of the master of a merchant ship, whose nautical history is brief enough. He was a little at sea in his early days, afterwards became a horse-dealer and auctioneer, failed in that, got into a steamer, as second or third mate, was turned out of her, and by inspiration became seaman and navigator enough to command a merchantman; was put out of one, after one voyage, but being rather in debt to her owners, in hopes of his working it out, they gave him another inferior one; in both instances taking care to put in a trustworthy mate to *nurse* him.]

BERMUDA ACIDS.

SIR.—I observe that my old friends the Bermudians complain, (perhaps with some show of reason,) that whilst the Government obtains the supply of lime and lemon-juice, for the use of the Royal Navy from Italy, their lemons are rotting under the trees. Are they sure that a little of the fault, if it be one, does not rest with themselves? They must not, like spoiled children, wait until they are invited to exertion for their own good, but be vigilant, and attract notice by zealous activity. The mountain will not come to the traveller, but he has the alternative of going to it; and so, if it be his desire to rise, by putting his "best leg foremost," he not only conquers his indolence, but accomplishes his desire.

The Government, however, has not been unmindful of them, they ought to be sensible of that, and not indulge in rebukes but rouse themselves to action, and try what they themselves can do. A door has been opened to them in the free port of Hamilton, whereby they may turn to *advantage* whatever of commercial spirit exists in their nature, as far as

their means will admit; other matters, I find are in progress, which will aid that spirit and those means. And, as I am not unmindful of old times, and have "stood up for them," I may be excused the liberty of suggesting to them to commence the operation of converting their acid fruit into the rob of lemon, by the simple process (cut into slices and exposed to the sun,) followed by the West Indians. If they will do this, bottle the inspissated juice, and send it to England, they may depend upon a ready sale for as much as they can produce, provided the price be moderate. The article does not deteriorate from being kept, and the lemon traders could not compete with the producers of rob on that account. That is obvious enough, so now I have shown them the goal, I should rejoice to see them make the start and win the race. Exertion is better than complaint at any time.

I may remark, *en passant*, that the lime, or lemon juice used in the navy is mixed with a certain proportion of vitriolic acid; (it is not pure citric, as supposed,) to preserve it from "mothering"; the rob, being the essence, does not require the mixture. In Jamaica I have seen also the rob of coffee, and of cayenne. I also learn that the Paisley operation has commenced in the entrance to St. George's harbour, and that it is progressing gradually to a favourable result. I am glad of this, for when the channel is freed from obstructions, the harbour will become the "beau ideal" of secure ports, and be of great utility to our ships of war.

I am, &c.,

To the Editor, &c. THE RAMBLER.

THE RAVEN ISLANDS.

Hall of Commerce, Threadneedle Street, July 11th, 1845.

SIR.—Having as I believe very narrowly escaped being cut off by savages or pirates, at the Raven Islands, in February, 1841, it appears to me that the "Notes during a run from Port Jackson to Hong-kong, in H.M.S. *Vestal*, 1844," as they appear in a leading article of the *Nautical Magazine* for the last month, are calculated, unwittingly, to assist in entrapping merchant vessels at those islands, and deeming the thing of sufficient importance, I beg to tender all the information in my power, to enable you to judge of the facts and circumstances; and therefore my log book, for the sake of the remarks made therein at the time, and also a pencil sketch illustrative of the sort of traps and decoys used to entice the ships' company are at your service, or at the service of any one you may be pleased to appoint to meet me at any time.

I am, &c.,

To the Editor, &c. E. P. GODBY.

[The foregoing will serve to put seamen on their guard, until we receive the further information which it promises.]

PORT LOUIS.—*Falkland Islands.*

Brig Hebe, Rio de Janeiro, May 1st, 1845.

SIR.—It being of importance that the situation and present circumstances of the chief settlement at the Falkland Islands, should be more generally

known amongst the commanders of merchant ships, trading to the Pacific, and having frequently visited them myself lately, I am induced to send a few notices respecting them to your valuable Magazine.

Port Louis, Berkley Sound, on the East Falkland, has for some years been the residence of the officer in charge, and the place resorted to by ships when in distress, or, in want of supplies; but, upon the islands being made a British Colony in 1843, it was deemed expedient for the greater convenience of shipping to establish the seat of government on the south side of a harbour (the Jackson harbour of the chart, and now named Stanley Harbour,) which communicates with Port William by an opening 900 feet wide.

Accordingly in July last His Excellency the Governor removed the establishment from Port Louis, and nearly all the settlers having followed, a little town is springing up, a portion of the interior has been surveyed, and the public buildings, notwithstanding the want of labour is severely felt, are steadily advancing.

One wing of a very neat and substantial government house is already finished, also temporary barracks for the detachment of royal sappers and miners forming the guard, some storehouses, forge, carpenters' shop, &c.

The great value of the position of this colony to ships receiving damage off Cape Horn, or in want of supplies is evident from the fact that two brigs, the Venture and Mauney, laden with valuable cargoes have recently put in very leaky, and had their cargoes transhipped to their respective destinations, which otherwise would, in all probability, have foundered at sea.

On my arrival in March last, there were four American whalers, refreshing in Port William; and one more arrived during my stay.

Beef is at present twopence per lb., and supplied from a herd of about 700, kept on a tussac peninsula close by, for the use of the settlement and shipping.

The survey of the whole of the islands by Captain Sullivan, in H.M.S. Philomel, is now completed, and it is to be hoped that the new charts will be soon before the public.

The Barque Mary Gray was lately lost on Pebble Island, after being struck by a sea off Cape Horn, and coming through Falkland Straits, in search of a port to refit in, which would probably not have happened with a chart of the new survey on board.

The present colonial establishment consists of his Excellency, Captain R. C. Moody, R.E., the Governor; a magistrate, surgeon, chief surveyor, clerk in charge of stores, and a private secretary. A chaplain is daily expected.

The settlers have been so much occupied during the last summer in erecting their dwellings, that no gardens have yet been formed, but the soil being favorable to the growth of cabbages, turnips, &c., it may be expected that next summer there will be a good supply of vegetables.

Fowls and pigs thrive well, and are fast increasing.

There is 14 feet at low water, just outside the kelp on both sides in Jackson harbour, up to the anchorage off the settlement, and the holding ground there, as well as in Port William, is every where of the best quality.

I am, &c.,

To the Editor, &c. C. T. ANDERSON, *Master.*

Examination of the Officers of the Royal Mail Steam Packet Company.

Hythe, near Southampton, July 10th, 1845.

Sir.—I beg that you will do me the favour to insert the enclosed set of examples, arranged by me for the examination of the officers of the Royal Mail Steam Packet Company, in your valuable Magazine, for the information of those applying for employment in the service; also a form of passing certificate supplied by the company, shewing the qualifications required in each capacity.

I am, &c.,

To the Editor, &c. John McDougall.

EXAMPLES..

Required the Course, Distance, Difference of Latitude, Departure, Latitude and Longitude, by account, according to the following Log account:—

Latitude, left 48° 39′ 00″ N., Longitude, left 5° 15′ 00″ W.

H.	K.	F.	Compass Course.	Entire Variation	True Course.	Tide or Current.		Height of		Remarks. 4th June 1846.
						True Set.	Drift	Bar.	Ther	
				°	° ′		m.		°	
1	8	—	S.WbW.	28 85	S. 28 15W.	E.S.E.	0·5	30 00	60	P.M.
2	8	—	—	—	—	—	—	—	—	
3	8	—	—	—	—	—	—	—	—	
4	8	—	—	—	—	—	—	—	—	
5	8	—	—	—	—	—	—	—	—	
6	8	—	—	—	—	—	—	—	—	
7	8	—	—	—	—	—	—	—	—	
8	8	—	—	—	—	—	—	—	—	
9	8	—	—	—	—	—	—	—	—	
10	8	—	—	—	—	—	—	—	—	
11	8	—	—	—	—	—	—	—	—	
12	8	—	—	—	—	—	—	—	—	Mid.
1	8	—	—	—	—	—	—	—	—	A.M. 5th.
2	8	—	—	—	—	—	—	—	—	
3	8	—	—	—	—	—	—	—	—	
4	8	—	—	—	—	—	—	—	—	
5	8	—	—	—	—	—	—	—	—	
6	8	—	—	—	—	—	—	—	—	
7	8	—	—	—	—	—	—	—	—	
8	8	—	—	—	—	—	—	—	—	
9	8	—	—	—	—	—	—	—	—	
10	8	—	—	—	—	—	—	—	—	
11	8	—	—	—	—	—	—	—	—	
12	8	—	—	—	—	—	—	—	—	Noon.

2.—Required the bearing and distance from lat. 48° 39′ 00″ N., lon. 5° 15′ 00″ W., to lat. 32° 43′ 54″ N., and lon. 16° 38′ 12″ W.

3.—Required the bearing and distance from lat. 32° 43′ 54″ N., lon. 16° 38′ 12″, to lat. 32° 43′ 30″ N., and lon. 79° 46′ 00″ W.

4.—A Ship sailed W.S.W. at the rate of eight knots an hour, in a current setting north 1½ miles an hour; required the course and distance made good in twenty-four hours.

5.—On 4th June, 1846, lat. by observation 48° 39′ 00″ N., and long. by chronometer 5° 15′ 0″ W.; on 5th June, lat. by observation 45° 45′ 18″ N., and long. by chronometer 7° 12′ 6″ W., but by account the lat. is 45° 39′ 47″ N., and long., 7° 28′ 6″ W., by the course steered, and distance given by the Patent log, the error of which had been previously ascertained, and the local attraction of the compass 3° towards the ship's head; variation by account, 25° 15′ W., required the set and drift of the current.

6.—On 11th June, 1846, at 10h. 0m. A.M., steering N.N.E. ½ E., and going at the rate of 8½ knots, north end of Union Island, bore S.E. ¼ E., and west end of Bequia, bore N.E. ¾ N., at 0h. 30m. P.M., north end of Union Island, bore S. ¾ W., and west end of Bequia bore E.b.S. ½ S.; required the set and drift of the current.

7.—On 5th June, 1846, at 12h. 0m. A.M. made Portland Bill, bearing N.E., distant seven leagues, it being the flood tide, setting E.S.E. two miles an hour, and the ship running at the rate of eight knots; what course must I steer, and what distance must I run to arrive at the Needles.

8.—On 9th June, 1846, at 3h. 30m. P.M., steering S.W. by compass, and going eight knots, observed Ilheo de Serra, bearing west, and at 6h. 0m. P.M. it bore N.W.; required the distance from Ilheo de Serra at both positions, and the lat. and long. of the ship.

9.—What bright stars will pass the meridian between 11h. 0m. P.M., on the 6th, and 2h. 0m. A.M., on the 7th June, 1846, and the times of their passage over the meridian.

10.—On 6th June, 1846, in long. 9° 30′ 0″ W., the observed meridian altitude of the sun's LL was 69° 26′ 00″, the height of the eye above the level of the sea was 22 feet; required the latitude.

11.—On 6th June, 1846, in long. 10° 0′ 0″ W. the oberved meridian altitude of the moon's L.L., (south of the observer,) was 36° 8′ 0″, the height of the eye above the level of the sea was 23 feet; required the latitude.

12.—On 7th June, 1846, at 8h. 15m. P.M., the observed meridian altitude of Spica, (south of the observer) was 46° 5′ 00″, the height of the eye above the level of the sea was 23 feet; required the latitude.

13.—On 8th June, 1846, at 10h. 0m. 0s. P.M., in long. 15° 4′ 0″ W., the altitude of the pole star was 33° 44′ 00″, the height of the eye above the level of the sea was 23 feet; required the latitude.

14.—On 5th July, 1846, at 11h. 4m. 26s., in lat., by account, 49° 30′ 00″ N., and long. 12° 0′ 00″ W., the true altitude of the sun was 61° 32′ 0″; required the latitude.

(*To be continued.*)

HURRICANE IN THE PACIFIC.

THE subject of Hurricanes seems at length to be making its way among seamen, and their laws (thanks to the exertions of Redfield and his followers) as far as concerns the safety of ships are beginning to be understood. There is left, however, a wide field for philosophy to enquire into respecting their origin, and the great agency by which the extraordinary phenomena are produced, that are regularly developed by them. Hitherto speculation has been busy on these subjects, but with more success have rules been laid down by which they may be avoided, than a theory established respecting their origin. The Atlantic and Indian Ocean, and China Sea have afforded data for investigation. We shall now record *one from the* log of H.M.S. Favorite, in the Pacific, as it is yet a ques-

tion whether they prevail equally in this as in the other seas we have mentioned, and whether they observe the same laws therein.

H	K	F	Courses.	Winds.	Force.	Wr.	Sig.	Remarks: Friday, Dec. 16, 1842.
1	6	4	S.W.b.W	North.		B.C.		AM. set jib.
2	6	4						
3	6					P.C.		
4	6	4		N.b.E.				5 set driver.
5	6							6·15 set rls, maintpmt, tpgalstd
6	6							8 set lower stud sail, down jib.
7	7							9 mustered at quarters. carpenters repairing ladders, &c.
8	6	4						
9	5	4						
10	5	6						
11	5							
12	5							

Course. SSW.½W.	Dist. 147 miles.	Lat. D. R. 20·34	Obs. 20·42	Lon. DR 204·19	Chart 204·9	Bearings and distance, water exd. 150 Mangeea S.59°W. 145 mls. Rem. 8150
1 6	S.W.b.W.	N.N.W.	4	B.C.		P.M. watch making sinnett.
2 6						artificers as in forenoon.
3 6						5·30 mustered at quarters.
4 6						6 down driver.
5 5 4						7·30 square yards, in main top
6 5 6						mast studding sail &c.
7 5						9 in starboard fore top studding
8 5		N.E.				sail, set both main topsails and
9 6						port topgallant studding sails.
10 6 2						
11 6 4						
12 7						

H	K	F	Courses.	Winds.	Force.	Wr.	Sig.	Remarks: Sat. Dec. 17, 1842.
1	8		S.W.b.W.	N.E.	5	B.C.M		AM.
2	8							2 in lower and post main topmst
3	7	4			6	O.C.M		and topgallant studding sails.
4	7							5·30 saw island Mangea, centre
5	6	6			4	B.C.		bearing S.W. ½ W.
6	6		SWbW½W					6·30 up mainsail, in studding
7	6							sails and royals. 7·30 in topgal
8	5		S.W.		5	G.C.		7·45 hove to. Mangea N.N.W.
9			Hove to					to E., one mile off shore.
10			off	E.N.E.	6	C. 2 P.		9 sent boats on shore, tacked as
11			Mangeea.					requisite, standing off and on.
12	4		W.b.S.½S.					11 up boats.

Course. ,,	Dist. ,,	Lat. D.R. 21.58	Obs. ,,	Lon. DR 201·52	Chart ,,	Bearings & dist. water exd. 150. Mangeea NEbE. 5 mls Rem. 8000
1 9	W b.S.½S.	E.N.E.	7	O. 2 R.		PM. 1·45 in maintopgallant sails,
2 9						3rd reef fore & mizen, 2nd main
3 9						topsail, split mainsail. 3·30
4 8	S.W.		11	2 K.		topgallant yards, and masts and
5	Head South					shortened all sail to fore and
6	to S.W.		11	O. 2 R.		main staysail and main trysail.
7	W.b S.toW.b.N.		12	2 R.		sent small sails, &c. on deck.
8	W.N.W.toN.W.	S.b.W.	12	2 R.		5 30 carried away main staysail
9	Head					shipped water, battened down.
10	N.W.					6·30 first gig lost, man drowned
11	to					7 jib blew to pieces, split driver.
12	N.N.W.	W.S.W.	10	2 C.		8·30 set fore and main staysails.

H	K	F.	Courses	Winds.	Force.	Wr.	Sig.	Remarks: Sun. Dec. 18, 1842.
1			Head from	West	10	2 R		AM. 3·30 set close reefed main
2			N.W.		8	B.C.		topsail and reefed foresail.
3			to	W.N.W.	4	B.C.M		4 wore ship. 4·30 set treble
4			N.N.W.					reefed fore and mizen topsails,
5	2		S.W.b.S.					out 4th of main. Set courses &
6	3							foretop mast staysail.
7	3	4	S.W. ½ S.					8·30 fidded topgallant masts, out
8	3	4			6	B.C.M		reef of driver and set it, bent &
9	3	4	S.W.b.S,					set jib
10	4							11·30 mustered at quarters, out
11	4	4	SWbS ½ S.	W.N.W.	5	E.C.		3rd reefs of topsails.
12	4	4	S.S.W.	W.b.N.				
Course			Dist.	Lat. DR.	Obs.	Lon DR	Chart	Bearings & dist. water exd. 150
S.62W.			43 miles.	22·17	22·1	201·11	201·16	I.Vasques S76W.904 mls R 7850
1	5	4	S.S.W.	West	5	B.C.		PM. 1·30 crossed topgallant
2	5							yards, out second reefs of top
3	4	4						sails, set topgallant sails and
4	4	4						flying jib. 4 lost log, chip, and
5	5		S. ½ W.	W.S.W.	5			line.
6	4	4						5·30 mustered at quarters, shiftd
7	4		S. ½ W.	W.S.W.				mainsail.
8	3	4			4	B.C.		
9	3	4			3			
10	3		S.b.W.½W			B.P.		
11	3		S.S.W.	West				
12	2	4			3			

A Sailor's Advice to his Son, *on entering the Royal Navy.*

(Continued from p. 262.)

Letter VI.

Professional Qualifications.

It will be your great duty, and it should be the first object in all your pursuits to obtain as much information on every subject connected with your profession, as your health and opportunities may permit. Your future distinction, if not entirely, in a great measure must depend on your superior attainments in these various branches of knowledge; and although influence, or fortuitous success may contribute to your early promotion, it will not only be highly commendable in you, but it will be so much the more expected that you strengthen and embellish your mind with those valuable attainments which constitute the scientific officer in public, and the accomplished gentleman in private life. When prospects of laudable ambition are no longer open to you, should your career be retarded by sickness, accident, disappointment, or neglect, you will find such acquirements a never-failing source of consolation; and should it be your fate to terminate your days in undistinguished retirement, (whether your past meritorious exertions may have been appreciated or not,) your proficiency in knowledge will bring you the agreeable and satisfactory resources of present occupation, and unassuming self-respect.

Seamanship, simply considered, is much undervalued by young officers, but it is the foundation of a comprehensive intelligence, uniting all the valuable materials which constitute a good officer. Until you know every minute and complicated part of the machine which you navigate; until you are thoroughly acquainted with the principle of working a ship, and the practical phrases *made use of* for that purpose, in your own and in foreign languages, (especially

in French;) until you possess a knowledge of the vast science of astronomy, as far as is necessary to navigation; until you are well informed in geography, the theory of the tides, the use of the globes, the principles of fortification, and the application of artillery; until you are conversant with the history of the celebrated seamen of former times, particularly those of your own country, such as Blake, Cook, Nelson, and others, with the nature of moral and social institutions, as they relate to personal and civil rights, as well as to public systems of political and military jurisprudence; and until you fully understand that code of discipline by which your professional views and conduct must be entirely regulated, you cannot be considered a thorough seaman. This is seamanship in its most comprehensive signification.

The first rudiments of it you will acquire by your own observation, and by questioning the old seamen whenever any evolution is performed; such as heaving up the anchor, making, and shortening sail, tacking, wearing, lying to, mooring, and unmooring, &c.; all of which are included in practical seamanship. The theory of it must be acquired by study and application under the schoolmaster; and if the boatswain, gunner, and carpenter are respectable men, and you behave to them with civility, they will each readily instruct you in their several duties of rigging, gunnery, and ship-building. A thorough knowledge of navigation will enable you to conduct a ship to any part of the globe, with the assistance of astronomy; geography will show you before hand the place you are going to visit, history will inform you of all important events relating to it, and an acquaintance with languages will enable you to converse with the natives, and in a great degree to ascertain whether that which you have read of them, and their country be true.

In the distant places which you will visit, you will see a great variety of fortifications, artillery, ships and boats variously constructed, and adapted to peculiar properties of local situation, climate, or otherwise. In the respect of the latter, you will find that the Norwegian launches from behind his rocks, and braves a stormy sea in a little yawl fastened together with wooden pegs; the islander of the Pacific guides the incredible velocity of his cane-built prow, half immersed in water; and the Coromandel pilot is perpetually overwhelmed in his flexible mascula boat, ere he can pass the furious breakers which are incessantly washing his shore. From a knowledge of the construction and properties of your own vessel, you will be enabled to form an opinion of the inferior or superior qualities of the respective varieties you may meet with. For instance, the Dutch, (once the second, and vigorously disputing to be the first maritime power of Europe,) have made the slowest advances in the modern improvement of naval architecture. Why is this? you will ask: the answer is, "Because they are under local disadvantages, and their commerce and naval celebrity have been on the decline for more than a century. Their harbours are shallow and of intricate navigation, consequently their vessels, both of war and trade, are flat, short, and bulky; easily wrecked, but incapable of velocity in progressive sailing. They owe their decline to the nautical enterprize and commanding resources of Great Britain. Russia and America present a different picture; they are states advancing in naval strength, why? Because they are empires advancing in knowledge, courting every improvement, and possessing resources in embryo, of which other nations are devoid. It would lead me into too long a discussion to elucidate this last assertion, we will therefore reserve it for a future discussion. I merely glanced at these two instances in order to lay before you a mode of exercising your mind, by applying to its spontaneous suggestions the terms why and wherefore.

Geometry and trigonometry will enable you, with practical precision, to ascertain the elevation of distant or contiguous objects; the breadth of channels, the demarcation of fortified places, the most secure method of approaching, attacking, carrying, or retiring from hostile batteries; and to penetrate with an accurate perception, into a variety of physical operations peculiar to

[redacted]

that pressure in acceleration or resistance, of its relationship to the diversification of the curved or rectilinear forms, would be premature, and above your present comprehension. Such abstract investigations must be reserved for your maturer intellect, as well as the whole combined operation of the atmospheric and floating pressure on the hull, masts, yards, and sails of a ship in every situation of evolution, progressive sailing or unmanageable recumbency, when rudder, sails, or skill are of no avail; but an acquaintance with this branch of nautical science will explain to you many daily hidden phenomena, entirely hidden from the mere practical seaman, and will enable you to act on many emergencies, for which he would be utterly incapable to provide any remedy. Yet as the most efficient mode of acquiring and retaining knowledge depends upon initiating yourself into the elementary principles, the study of mechanics, (which you will see daily illustrated in the tackle, quoin, handspike, winch, capstan, &c.,) should precede that of naval architecture.

The knowledge of the French language is so universal, that it is considered discreditable to a gentleman not to understand it, if he cannot speak it fluently. It is besides very useful in the navy, and Spanish and Italian may be considered next to it. As I before observed the best treatises in marine science are written in the former language, as Bouquer, Der Hamel, Lalande, &c. What you already know of Latin will be a great auxiliary to you in acquiring them, which, if you are so disposed, you will have many opportunities of doing. A good grammar and vocabulary of each, will be sufficient to ground you distinctly in their rudiments, and you must take advantage of every opportunity while it is yet in your power, to improve that foundation, by requesting foreigners to practice and correct you in their idiom and pronunciation.

An acquaintance with those branches of human industry which constitute the riches of a state, is frequently undervalued by those whose pursuits are chiefly of a military nature; but as matter of information, a knowledge of the relative situation of arts, manufactures, and commerce in various quarters of the globe, will add an important and useful stock of intelligence to the officer's mind.

Avoiding speculative opinions as to the past or ultimate influence of a vast and increasing commerce on the manners, morals, or real happiness of mankind, and the solid permanent power of a nation, it is sufficient for my purpose to observe to you, that an insight to its present operation on the prosperity of rival countries, is requisite and desirable. I do not mean that your mind should take a commercial bent, far from it. Poring over L.S.D. calculations, for the sake of pecuniary accumulation, is as unsuitable for an officer as the neglect of them would be reprehensible in the counting-house clerk; but as you will be engaged in a profession established to protect and to promote every interest of your country, and especially its trade, it is in an enlarged signification that I wish you to know something of the nature of the great principles of commerce. The various foreign vessels which you may visit will elucidate your reading on the subject, anchorage in foreign parts will accurately and extensively increase your information, for it embraces innumerable considerations, port duties and rights, interior and exterior customs, exercise, charter-registry, and rights of vessels, natural productions, export and import articles of a country, ingenuity of its artisans, mode, price, quantity, and quality of its manufactures, rates of exchange, general character of its mercantile population, method of transacting business, and many more which I shall not here enumerate.

In the ancient histories which you will read, especially of Greece, Rome, and Carthage, where striking examples of individual and general heroism are more frequently pourtrayed, than in the annals of remoter times, you will learn the power of that weapon, the sword, which you are destined to wield; you will learn the origin, nature, and necessary authority of laws, and the mighty capacity of the human mind to overcome vast difficulties by political sagacity alone. Philip of Macedon, his son, Alexander the Great, and Julius

Cæsar, afford, in my opinion, the three greatest instances of the combination of the former with the latter in one person, which the records of history afford. In what is denominated modern history, you will read of a display of the same ambitious passion for dominion and conquest; as if no system of pure, self-denying religion had, in the interval, been revealed to mankind, and though the refinement of our immediate period has mitigated the sanguinary attributes of war, it has hitherto done little to remove the causes which provoke to inveterate hostility.

It will therefore be your duty at all opportunities personally to inform yourself of the political and military strength of the countries which you visit, of the nature of their governments, and peculiar character of their legislature, diplomacy, and resources; of the discipline and tactics of their fleets and armies, the pilotage and extent of their harbours and coasts, the position and assailable points of their fortified places, the warlike genius, capacity, and physical character of their officers, troops, and seamen, and of their modes of manœuvre by land and sea. To collect into one form your intelligence upon these points, never enter too minutely into the detail of trifling matters; keep a journal, and insert all your observations in laconic and explicit terms; exercise your memory frequently upon it, for however you may be taught to deprecate war as an evil, it is often an unavoidable one, in which your duty will engage you, and where all the information you will gain, will better qualify you to act with distinction to yourself, and benefit to your country, whose sword and bulwark is her navy.

(*To be continued.*)

Aboriginal Sailors.—Mr. Boyd has brought up with him from Twofold Bay a crew of Aboriginal seamen, who appear to be a finer and more intelligible race of men than any of the native tribes on this side of the continent. We congratulate Mr. Boyd on his successful application of aboriginal labour to the purposes of navigation. We have had the curiosity to make inquiries on board the Wanderer, respecting the habits, customs, and dispositions of these men, the result of which inquiries we lay before our readers:—Toby, the King, native name Budyimbree, the King of the Nullika blacks, whose country extends from the south side of Twofold Bay towards Cape How. The tribe, are a fine, bold, and manly race, and in a great measure, from living upon the coast, their habits are aquatic; and in their bark canoes they may be seen in the most boisterous weather, buffeting seas where a whale-boat can scarcely live. Their mode of fishing is very peculiar, showing not only great industry, but extraordinary power of vision, when using the wommora and spear, the latter of which they will throw for thirty or forty yards at fish a considerable distance beneath the water, rarely missing their aim, the spear generally penetrating right through the head. They are remarkably useful during the whaling season, and if only led on by a white person, form excellent boats' crews. They are warlike and superstitious; if a death occurs amongst them, they generally attribute it to some malign influence of a hostile tribe, and the result is, that they are in repeated warfare. About twelve months ago they surprised the encampment of the Woolindilly blacks early in the morning, and killed a great many. They make excellent stockmen, and if properly treated, might be made very useful members of society; they have great powers of imitation, a natural turn for music, and acquire the English language with great facility; they have no belief in the Divine Being, but believe in transmigration, nor will any thing induce them to attack the grampus, for they believe these are their deceased relations and friends. Mr. Boyd brought up King Toby and seven of his subjects, to assist in working the Wanderer from Twofold Bay to Sydney, and, having only three European *sailors on* board, found them extremely useful. Their daily request is to be

permitted to come on shore to hear the band, and they seem highly pleased with the novelties of Sydney.—*Australasian, April 8th.*

Harbour of Refuge at the Cape.

14, *Hackney Terrace, Hackney, June 26th*, 1845.

Sir.—If you have had under your notice the Cape of Good Hope Government Gazette, dated Jan. 10th, 1845, you would perceive that a commission had been previously appointed by the Governor of that Colony, to report unto him on the practicability, expense, &c., of making a safe and commodious harbour in Table Bay; and that, that commission was composed of a military engineer-officer, a naval officer, a clergyman, and an editor of a newspaper, (being three landsmen, and one seaman.) You would also perceive in the same Gazette, that these gentlemen produced a plan for a harbour, which, according to their estimate, would cost £700,000! being the cost of fourteen 74-gun ships.

Now, as this mighty production, put forth by these commissioners, must prove an enormous abortion, and far worse than nothing toward promoting a harbour in that bay, I, therefore, take the liberty to transmit to you this, my, opinion of that report on this very important public question, to insert in your valuable Magazine, for the information, and critical notice, of the public that are more concerned in this matter than those commissioners.

I also send to you, to make what use you please, my far more practicable and economical plans to this effect, and more useful in practice, according to the opinions of real practical men well acquainted with Table Bay, and the nature of the case; with the view of bringing this desideratum again, as it was previous to the issuing of that commission, *within the reach of Hope.* By my plans and reports, you will perceive how much I have laboured to promote this desirable object, and, I may add that, when no one who tried could at all devise any feasible plan (for this huge plan is only a modification of mine).

Now, however, after a lapse of twenty years, these commissioners, instead of any way promoting this object, have produced a monster of a plan that must scare every ministry from examining what the thing is for a very long time. But, instead of that *negation*, (the commissioners' report,) if the piers for a harbour there were to be formed of stones merely dropped in their places from the moveable projecting stages on which they would be wheeled from the quarries on the shore, and left to work their angles and interstices together, (for they are all naturally angular,) without even any placing by hand, excepting a little arrangement or packing of them above water, they would wedge so firmly together, and form such rough, but useful breakwaters as could not be afterwards moved by the surges of the seas, protected as my plan would be; and these would constitute as safe a harbour for ships, and the lives of their crews, wherein to shelter, as if these piers were to be as finely dressed, and costly put together as the piers have been at Ramsgate. Nay, that, for ships over ten feet draught of water, would be far safer than is this harbour. The insides of the rough breakwaters which I have suggested, should, however, be roughly walled above water, and piled for ships to lie against, especially the south one in the first instance, and its top levelled for the convenience of landing and shipping cargoes. If only thus much were to be done, (as I suggested twenty years since in my reports, and delineated on my plans,) it would be all that the case requires, and the greatest boon that was ever bestowed, or could be, on the British nation generally, at the Cape of Good Hope. But if this simplest of all plans, the least costly, and the most useful, be not attended to, surely a job of £700,000 cost, will never be sanctioned by any ministry in Table Bay; and, consequently, there never

will, probably, be any ship-harbour in that wild bay. That huge abortive plan and report must tend, more than all other obstacles, to seal its fate, unless mine be adopted. And I may add, that those exposed to the danger, who prefer to have no harbour at all there unless it cost £700,000, are like starving men that refuse food if it be not of the most costly kind.

I remain &c.,

To the Editor, &c. ROBERT KNOX.

TEAK TRENAILS.—By the new act 8th Victoria, cap. 12, teak wood, for ship building purposes, is admitted, on importation into this country, free of duty. On a recent importation of a parcel of trenails, made of the teak wood, being used for the purpose of ship building, it has been decided, that though split and partially rounded at the corners, yet they could not be considered a manufactured article, as they would have to undergo a further process of rounding before they could be used for the purposes to which they are applied, and are therefore entitled to be admitted as "teak wood, for ship building purposes," free of duty, under the act alluded to. From this and other instances of decisions with respect to the importation and admission of raw material, duty free, it is evident that there is an intention on the part of the revenue authorities to second, as far as practicable, the liberal intention of Parliament with respect to the admission of raw material for the purposes of English manufacture.—*Shipping Gazette.*

THE LIVES OF SAILORS SAVED BY SHARKS.—In the *Times* of the 11th instant some particulars were given relative to the upsetting of the slave schooner Felicidade, on board which the massacre of a prize crew had been perpetrated. That vessel was recaptured by the Star, and sent to Sierra Leone, in charge of Lieut. Wilson and nine men. Whilst on the passage, during a heavy squall, the schooner went over, filled and sank, so as only to leave part of her bow-rail above water. When the squall passed, the whole of the crew were found clinging to the bowrail.

Some expert divers attempted to extract provision from the vessel, but without success; and nothing but death stared them in the face, as the schooner was gradually sinking. Lieut. Wilson ascertained there were three common knives among the party, and it was resolved to make a raft of the main-boom and gaff, and such other floating materials as remained above water. These they secured by such ropes as could be cut and unrove from the rigging, and a small quantity of cordage was retained to make good any defects they might sustain by the working of the spars; a small top-gallant-studding-sail was obtained for a sail, and upon this miserable float the ten persons made sail for the coast of Africa, distant 200 miles, without rudder, oar, compass, provisions, or water. Being almost naked, and washed by every wave, their sufferings were very great. Famished for food and drink, scorched by a burning sun during the day, and chilled with cold during the night, they thus remained twenty days. Delirium and death relieved the raft of part of its load of misery, two blacks were the first to sink under their sufferings.

The question naturally suggests itself—how did the survivors support life? Some persons would be almost afraid either to put the question, or hear the answer. There is nothing, however, to wound our feelings, but much to admire in the admirable conduct of Lieut. Wilson and his men, during these melancholy and miserable twenty days. Showers of rain occasionally fell;

they caught some water in their little sail, which they drank, and put some into a small keg that had floated out of the vessel. The sea was almost always breaking over the spars of the raft, which was surrounded by voracious sharks. The famishing sailors actually caught with a bowling knot a shark eight feet in length with their bare hands, and hauled it upon the raft; they killed it, and drank the blood, and ate part of the flesh, husbanding the remainder. In this way three other sharks were taken, and upon these sharks the poor fellows managed to prolong their lives till picked up (in sight of the land) in what may be termed the zero of living misery.

Lieut. Wilson and four seamen survived and recovered their strength. Order and discipline were maintained upon the raft; fortitude, forethought, a reliance upon divine Providence, and good conduct, enabled these Englishmen to surmount such horrible sufferings, whilst the Kroomen and Portuguese sank under them.

THE MILLBAY PIER, PLYMOUTH.—This fine pier is now so far completed as to have been satisfactorily used by the Great Britain iron steam-ship, during the whole of her stay at Plymouth. On the 19th of June, in addition to the above ship, which was moored on the northern, or inner side, there was the Ariadne, Torquay steamer, on the southern side, and a lesser steamer at the end. Since the commencement of the present year, the Cork and London steam-packets have used the Millbay Pier only for landing and embarking goods and passengers, coaling, &c. Excepting the government establishments, it is the only place within the port of Plymouth, where a steamer can lay alongside, and remain afloat at all states of the tide, and the possession of such an advantage must be highly conducive to the progressing commerce of this rising port. The pier was erected by Mr. Gill, M.P., the proprietor of the West Hoe estate, from the western shore of which it extends 437 feet, nearly in a south-west direction. The public spirit with which Mr. Gill commenced this undertaking, has been only equalled by the perseverance evinced in its construction. The royal assent was obtained in July, 1840, and workmen commenced operations in October, 1841. Since that date 106,000 tons of blocks, large and small stones, and 37,000 feet of wrought stone have been deposited, and 1,000 loads of oak, elm, and pine timber used; and thus, within a period of less than four years, through the exertions of an individual merchant, has a pier been constructed, capable of affording a secure accomodation for the longest ship in the world.

NAUTICAL NOTICES.

BUOYS OFF POINT SALINAS, *Grenada*.—Extract of a letter received at Lloyd's from Grenada, dated Mar. 25th.—"The Commissioners of the Harbour and Port of St. George, make known to you, as agent for Lloyd's, that the red and black buoys on the three fathom bank, off Point Salinas, having been carried away, it is not their intention to replace them."

Liverpool, May 4th, 1845.

SUNKEN ROCKS.—The following has just been communicated to me by Mr. Robert Hilton, chief officer of the barque Secret, of this port, and I have every reliance on his veracity.

"Barque Secret from Valparaiso towards Liverpool, 12th May, 1845. While observing a meridian altitude, breakers were reported; they were of

no great extent, but Mr. H. plainly saw some objects in the hollows of the waves, which he felt perfectly certain were heads of rocks. The swell was not very heavy, and he thinks in smooth water they would be nearly on a level with the surface of the sea. The breakers were about 1½ or 2 miles S.W. (by compass,) from the vessel, and at the time she was running 7½ or 8 knots, with steering sails set, so there was not much time for very particular remarks."

"The latitude stated, 39° 18′ N., and longitude 35° 50′ W., was from meridian observation, and the longitude from the mean of these observations, viz., their own chronometers, the chronometer of a ship in company, and a lunar taken by Mr. H. himself the same afternoon."

I am, &c.,

ANDREW LIVINGSTON,

To the Editor, &c. *Teacher of Navigation, &c.*

Gibraltar, June 10th, 1845.

CABEZOS ROCKS.—The masters of vessels passing the Straits should be careful to keep clear of the two dangerous sunken rocks Cabezos, a little to the westward of Tarifa, and the Pearl Rock, one mile south of the Point Carnero, at the entrance of this bay; vessels being constantly lost on one or the other of these rocks.

SANDBANK.—The master of the Norma, Biroche, from Marseilles, arrived in the Loire, reports that north 7° west of the point Gualmesi, distance three quarters of a mile, there has lately formed itself a sandbank, the more dangerous as the current, since its formation, from the Island Tarifa bears directly on the shore. The said master has seen an English galliot strike on this bank, but being a very small vessel, not drawing ten feet water, she got off again. It was the intention of Mr. Biroche to send off a boat, in order to take soundings, and ascertain the extent of the bank, but the night setting in, and it becoming calm, he, as well as all other vessels, endeavoured to get clear of the Island Tarifa.

The foregoing notices appear in that valuable journal the *Shipping and Mercantile Gazette*, a daily paper which is doing an infinite deal of service to navigation by the Nautical Notices it contains, independent of the sound views which it takes of matters concerning the welfare of our mercantile shipping in general. And it is for the purpose of adding to this caution that we recommend vessels entering or leaving the Straits, (as there is a nest of dangers about the Cabezos,) not to bring Tarifa to the southward of E.b.S. ½ S. by compass, when more than a league from it, unless Paloma tower bears E.N.E., to the northward of which latter bearing they may stand in shore. With regard to the Sandbank off Point Gualmesi, some error appears to have crept into the bearing. But as the Point may possibly bear N. 7° W. from the bank, we preserve the notice, both as a caution to vessels, and until a more satisfactory account can be obtained of its real position.

THE LIGHTHOUSE AT BERMUDA.—Seventy plates of the lighthouse on Gibbs Hill are now up, the second floor is laid, and the brick-work lining nearly finished. Some idea of the height of the tower when completed may now be formed, as it is one half (60 feet) of its intended altitude. We were told that it was seen from a vessel when running for the land, a week or two since, before land was discerned.—*Bermuda Royal Gazette, June 17.*

FREE PORTS OF LAUNCESTON, VAN-DIEMEN'S LAND.—By an act of the *Legislative* Council of Van Diemen's Land, the ports of Hobart Town and

Launceston are declared free ports for all vessels in the South Sea whale fishery. All tonnage, light, harbour dues, and pilotage being entirely abolished, vessels engaged in the whale fishery can now visit this port, free from all port charges, and, on application to the collector of customs, can land a sufficient quantity of oil and bone to pay their expenses of outfit, &c. The oil and bone landed here, is only liable to a duty of five per cent, and is always saleable at remunerating rates. Fresh meat, vegetables, and every description of ship stores, are to be had at moderate prices; and an abundant supply of wood and water can be had with every facility.

Trinity House of Montreal, June 6th, 1845.

LAKE ST. PETER, ST. LAWRENCE.—Public notice is hereby given, that the two light vessels in Lake St. Peter have been painted red, and furnished each with a blue flag, to be hoisted at the mast-head during the day. The buoy is laid down on the bar, above the upper light vessel, near the west side of the channel. Vessels passing upwards keep the buoy on the starboard hand, passing down, on the larboard hand. A buoy is likewise laid down on the lower bar of Isle Platte, on the south side of the channel: vessels passing upwards keep it on the larboard hand, downwards on the starboard hand. The buoy at Isle-a-la-Bague is on the north-west side of the ship-channel: vessels passing upwards keep it on the starboard hand, downwards on the larboard hand. The lighthouse at Isle-a-la-Bague is painted red; the buoys described in this notice are painted black.

By Order, JAMES HOLMES,
Registrar, T.H.M.

We shall be thankful for an authentic statement, which will enable us to lay down the actual positions of the above light vessels and buoys, as well as that of the lighthouse of Isle-a-la-Bague.

BANK.—The Betsy and Jane, Breevoon, at Philadelphia from Falmouth (Ja.) reports that on the 29th ult. at 2 P.M., lat. 20° 20′, long. 30° 33′, saw the bottom, (white and black patches,) quite plain, and sounded several times in 13 to 14 and 15 fathoms water; at 3 P.M. got off the bank. This bank is not on the chart.—*New York Paper.*

The foregoing appeared in the *Shipping Gazette.* In transferring it to the *Nautical Magazine* we may first allude to the longitude, which is evidently wrong, and which we conclude to be meant for 80° 33′, This, with the latitude given, will place the Betsy and Jane a little west of the Pickle bank of 1840, (south coast of Cuba,) a bank which it is likely would be seen by a vessel from Falmouth, (Jamaica) on her way to Philadelphia, by C. St. Antonio and the Florida gulf. We should be glad, however, to have a confirmation of this our view, from the master of the Betsy and Jane, and in the mean time, ships may look out for less water than 13 fathoms. The Admiralty chart, we perceive, gives 14 fathoms.

VOLCANIC ERUPTION IN THE MEDITERRANEAN.—Mr. Caithness, Commander of the English brig, Victory, laden with patent fuel from Newcastle, bound to Malta, where she arrived on the 20th June, reports that on the 18th idem, at half-past 9 P.M., (having been at noon, from observations taken by two chronometers, in lat. 36° 40′ 56″, and long. 13° 44′ 36″,) both the top-gallant-mast and the royal mast went suddenly over the side, as though if by the effects of a sudden heavy squall, though there was not at the time the least appearance of a squall, or bad weather of any kind. At half-past eleven it came on to blow hard from the S.S.E. to S.E., and all hands were sent up to reef the topsails, when all of a sudden it fell dead calm, and the crew as

well aloft as on deck, could scarcely breathe from the sulphurous exhalations, dust of sulphur, and intense heat which prevailed. The ship laboured considerably all the while, and at a distance of about half a mile, three immense balls of fire were seen to issue from out of the sea, and remained visible for about ten minutes. Another heavy squall shortly after came on from the S.S.E., and soon carried the ship out of the hot, into a cold, current of air.

The foregoing notice from the *Times* places the brig Victory close to a bank on the south coast of Sicily, on which is marked 50 fathoms, in Capt. Smyth's chart. As it is not very distant from the neighbourhood of Graham's shoal on the south coast of Sicily, we should not be surprised at hearing of another such visitor thrusting its volcanic head above water, and disappearing in a similar way, to form a similar bank. The foregoing will be a caution to seamen.

Delaware Shoal, Pacific.—Sir.—"I have the honor to inform you that very lately the American brig Delaware discovered a shoal above water, situated in lat. 27° 26′ N., long. 174° 25′ W., and as seen some miles distant, appeared about twelve or fourteen miles long. In the neighbourhood of this shoal, there are many shoals and dangers, little, if at all known."

I am &c.,

H. S. Hunt,

Lieut. and Com.

This shoal appears to be a continuation of the chain of dangers extending W.N.W. (true) from the Sandwich Islands, and is about 90 miles E.b.S. (true) from Clark's islands and reefs in Arrowsmith's chart, discovered by the Ships Pearl (Capt. Clark,) and Hermes (Capt. Philips,) upon which both ships were wrecked 26th April, 1822.

The Port of Riga.—Our sea bar has improved latterly, and it is expected we shall get as much as fourteen feet of water on it. There is this depth, indeed, already, in one of the channels leading to the sea, which has been brought about by scraping, and they are still continuing that process. You may state this as a fact, and we hope some more ships will, in consequence, be induced to come out to Riga.—*Riga, June 16th*, 1845.

Hydrographic Office, July 2, 1845.

Lights on the North Coast of France.—The French Government has announced, that on the 13th of next month the following lights will be established on the North Coast of France:—

1. *Flashing Light of Ile Vierge.*—This bright light will be varied every four minutes by a Red Flash; and each flash will be preceded and followed by short eclipses.

The light-house stands 110 yards from the eastern extremity of Vierge Island, and two miles E.N.E. by compass from the outer anchorage of Abervrac'h in lat, 48° 39′ 23″ N., long. 4° 34′ 0″ W.

The light is 108 feet above the level of the sea at high water of spring tides, and may be seen at the distance of 15 miles.

2. *and* 3. *Two Lights of Abervrac'h.*—The westernmost of these light-houses is placed on Vrac'h Island, which lies to the eastward of the entrance of Abervrac'h, in lat. 48° 36′ 57″ N., long. 4° 34′ 30″ W. The light will be Red, and Fixed, and will stand 59 feet above the level of the sea at high water of spring tides. It will be visible in fine weather at the distance of 4 miles.

The easternmost light is also fixed, but bright, and will be placed on the *tower of* Plouguerneau Church, nearly 4 miles S.E.b.E. by Compass from

the above light on Ile Vrac'h. It will stand 226 feet above the level of the sea at high water of spring tides, and may be seen at the distance of ten miles.

Note.—The Red light of Ile Vrac'h in one with Plouguernean light, will be the leading mark for running into Abervrac'h Creek, from the sea; but it will pass within 80 yards of a Rock called the *Petit Pot de Beurre*, which lies in the outer anchorage of Abervrac'h, and which must be left to the northward. The light-house on Ile Vrac'h will be painted white, so that the above mark will be equally conspicuous by day.

It is intended to establish two small inner lights, for the purpose of guiding vessels not only into the principal anchorage of Abervrac'h, but up to the Creeks of Anges and St. Antoine, which dry at low water.

It is high water at full and change in Abervrac'h, at 4h. 17m.; and ordinary spring tides rise about 25 feet.

Hydrographic Office, Admiralty, June 26th, 1845.

Revolving Light in the Piombino Channel, Mediterranean.—In conformity with the intentions of the Grand Ducal Government of Tuscany, of which notice was given by this Office on the 22nd of January; a revolving light has been established on Palmajola Island in the Piombino Channel.

The Light-house stands in lat. 42° 51′ 30″ N., and long. 10° 28′ 0″ E.

The Light is 344 feet above the level of the sea, and will be seen at the distance of 20 miles.

The Light will reappear every half minute; and the eclipses will be complete beyond the distance of seven miles; but within that distance a faint light, during those intervals, will be visible.

Orion Rock, *Atlantic.—No Soundings.*—We have received the following, communication from Liverpool—"The master of the Orion, belonging to our port, Luytjas, from Trinidad de Cuba, arrived in the Weser, has furnished the following particulars of a rock fallen in with;—On my voyage from Trinidad de Cuba for Bremen, we perceived, May 5th, lat. 34° 51′ N., long. 72° 28′ W., a rock about two feet above the water. It had the appearance of a water cask of two or three hogsheads. We were at a distance of only twenty feet from the rock, when we fortunately in time discovered it. On none of my sea charts, (and I had several of the most recent on board,) was this rock to be found."—*Bremen, July* 17.

Dyet Rock, *Atlantic.—No Soundings.*—On my passage from St. Kitts to London, and when off Bermuda, May 17th, 8h. A.M., we passed within 30 or 40 feet of two sunken rocks, having 6 or 8 feet over them, it being very smooth at the time, in lat. 32° 46′ N., at noon, long. 60° 6′ W. by a good chronometer, and by several lunar observations previously. I strongly suspect they are the rocks marked as doubtful in lat. 32° 30′, long. 59° W., hoping you will publish this for the benefit of navigation.

I am, &c.,

Robert Dyet,

Master of the Barque, Catharine Greene of London.

The Royal Navy.—*Supplemental Estimate for the Years* 1845-46.

An Estimate of the amount required to provide for sums that may come in course of payment in the half-year ending on the 31st of March,

[illegible] first of soundings, and nearer than which generally [illegible] increasing all the while, and at a distance of about half a mile, three successive lights of fire were seen to issue from out of the sea, each continued visible for about ten minutes. Another heavy squall shortly after came on from the S.S.E., and soon carried the ship out of the [illegible]

The foregoing notice from the *Times* places the brig Victory close to a bank on the south coast of Sicily, on which is marked 30 fathoms, by Capt. Smyth's chart. As it is not very distant from the neighbourhood of Graham's shoal on the south coast of Sicily, we should not be surprised at hearing of another such visitor thrusting its volcanic head above water, and disappearing in a similar way, to form a similar bank. The foregoing will be a caution to seamen.

Dreadful Shoal, Pacific.—Sir,—"I have the honour to inform you that very lately the American brig Delaware discovered a shoal above water, situated in lat. 27° 26' N., long. 174° 25' W., and is seen some miles distant, appeared about twelve or fourteen miles long. In the neighbourhood of this shoal there are many shoals and dangers little, if at all known."

I am, &c.

H. S. Hurse.

Lieut. and Com.

This shoal appears to be a continuation of the chain of dangers extending W.S.W. (true) from the Sandwich Islands, and is about 30 miles E.S.E. (true) from Clark's islands and reefs in Arrowsmith's chart, discovered by the Ships Pearl (Capt. Clark), and Hermes (Capt. Philips), upon which both ships were wrecked 16th April, 1822.

Tide Power on Riga.—Our sea has an improved interest, and it is expected we shall get as much as fourteen feet of water on it. There is this month, indeed, already, in one of the channels leading to the sea, which has been brought about by scraping, and they are still continuing that process. You may state this as a fact, and we hope some more ships will, in consequence, be induced to come out to Riga.—*Riga, June 16th, 1832.*

Hydrographic Office, July 2, 1832.

Lights on the North Coast of France.—The French Government has announced, that on the 15th of next month the following lights will be established on the North Coast of France:—

1. *Flashing Light of Ile Vierge.*—This bright light will be varied every five minutes by a Red Flash: and each flash will be preceded and followed by short eclipses.

The light-house stands 110 yards from the eastern extremity of Vierge Island, and two miles E.N.E. by compass from the outer anchorage of Aberwrach in lat. 48° 39' 25" N., long. 4° 34' 0" W.

The light is 180 feet above the level of the sea at high water of spring tides, and may be seen at the distance of 18 miles.

2. and 3. *Two Lights of Aberwrach.*—The westernmost of these light-houses is placed on Vrach Island, which lies to the eastward of the entrance of Aberwrach, in lat. 48° 36' 37" N., long. 4° 34' 30" W. The light will be Red, and Fixed, and will stand 19 feet above the level of the sea at high water of spring tides. It will be visible in fine weather at the distance of 4

easternmost light is also fixed, but bright, and will be placed on the [illegible] Church, nearly 4 miles S.S.E. by Compass from

the above light on Ile Vrac'h. It will stand 220 feet above the level of the sea at high water of spring tides, and may be seen at the distance of ten miles.

Note.—The Red light of Ile Vrac'h in one with Plouguernean light, will be the leading mark for running into Abervrac'h Creek, from the sea; but it will pass within 80 yards of a Rock called the *Petit Pot de Beurre*, which lies in the outer anchorage of Abervrac'h, and which must be left to the northward. The light-house on Ile Vrac'h will be painted white, so that the above mark will be equally conspicuous by day.

It is intended to establish two small inner lights, for the purpose of guiding vessels not only into the principal anchorage of Abervrac'h, but up to the Creeks of Anges and St. Antoine, which dry at low water.

It is high water at full and change in Abervrac'h, at 4h. 17m.; and ordinary spring tides rise about 25 feet.

Hydrographic Office, Admiralty, June 26th, 1845.

REVOLVING LIGHT IN THE PIOMBINO CHANNEL, MEDITERRANEAN.—In conformity with the intentions of the Grand Ducal Government of Tuscany, of which notice was given by this Office on the 22nd of January; a revolving light has been established on Palmajola Island in the Piombino Channel.

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THE ROYAL NAVY.—*Supplemental Estimate for the Years* 1845-46.

An Estimate of the amount required to provide for sums that may come in course of payment in the half-year ending on the 31st of March,

of 110*l.* per annum, and to those of the officers entitled to assume the rank of rear-admiral the pension of a rear-admiral's widow.

Should any great national event render it right to grant the boon of a general promotion, it is proposed that the two limited lists so increased in numbers should be gradually reduced to the numbers already specified, by a recurrence to the principle of restricted promotion, instead of filling up every vacancy, and that the same rule should apply to any temporary increase in the number of captains created by promotion awarded for brilliant or distinguished service.

A considerable additional expense will, in the first instance, be necessarily incurred by the retirement of the large number of officers proposed, which expense, however, will be in process of annual diminution, as the officers whose vacancies are not to be filled up die off the list, whilst savings to a large amount, arising from various causes hereafter specified, will, by the operation of the proposed plan, gradually accrue.

By a calculation founded on the average tables of mortality, it is assumed that the retired list of 300 captains will be reduced to 100 in about 17 years; consequently, the expense of retirement, which in the first year will amount to about £30,000, will diminish annually, till in the 17th year it will be reduced to a little more than £10,000, which will be the permanent charge required to be maintained. And further, as the 200 officers who will thus be removed from the retired list, without being replaced, will not contribute to promotion on the active list by the usual promotion of one officer for every three vacancies, an annually increasing saving will accrue, which, in the 16th year will amount to above £5,000 per annum.

A further saving will also result from the reduction of the list of flag-officers to 150, from the number at which of late years it has been maintained, and to which it would be restored by another brevet promotion.

In addition to these savings, there are some others which form a considerable item in the calculation of the savings to be effected by the adoption of the foregoing plan; the general result of which will be, after a few years, an excess of saving over the cost, amounting to many thousands per annum.

It is believed that the terms on which this retirement is offered are consistent with that due regard to economy which should animate every public department in the consideration of all questions involving an expenditure of public money, and at the same time sufficiently liberal to induce the officers to whom they are offered to accept them.

Such is the plan of retirement which, after a full consideration of all difficulties, has met the approbation of the Admiralty, and is, by that department, recommended to the favourable consideration of the Government and Parliament.

It is quite impossible to calculate with certainty on its success, founded as it is upon the principle of voluntary retirement, but it promises to be as effective as any plan can be made, from which the principle of compulsory retirement is necessarily excluded.

Its superiority to any former proposals consists in the great number it withdraws from the effective list, and the precautions it recommends, in order to prevent the recurrence of a state of difficulty and stagnation *hereafter similar* to that which now exists; its ultimate adoption, how-

ever, must be dependent on the reception which the officers interested may give to the plan.

It is too obvious to require explanation, that unless the number required (or nearly so) should accept the offer made to them, very little good would be effected, and the country would be put to a heavy charge for increased dead weight, without deriving any corresponding benefit.

It is only necessary to refer to what has been said of the former proposals, and the reason for rejecting them, arising from the state of the captains' list, to show that by no retirement less extensive than that proposed can we hope to see a class of men advanced to the head of the captains' list, who from their time of life are likely to be fully qualified for the active duties of service in the highest ranks of the profession.

Unless, therefore, we can remove from the captains' list the number now proposed by voluntary retirement, it would not be advisable to persevere with the plan; but in that case it will be the duty of the Government to consider what ulterior measures may be necessary in order to provide for an efficient list of flag officers.

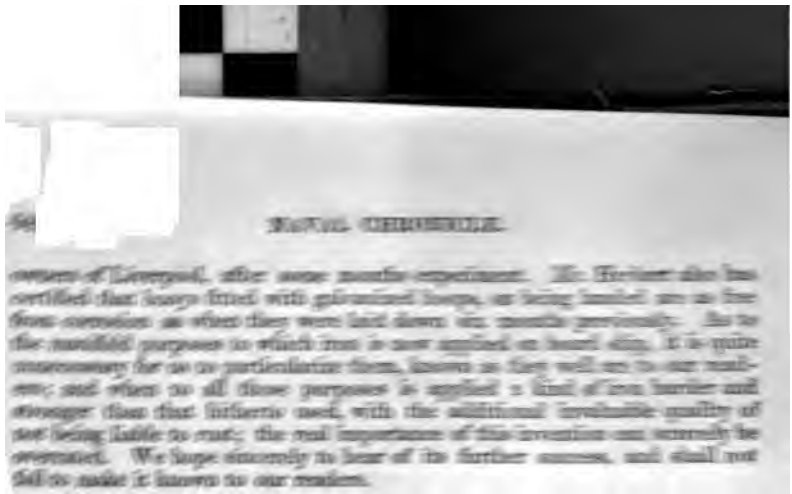
A vote in supplement of the present naval estimates, amounting to 15,000*l.* the estimated cost of the retirement for the half year commencing the 1st of October, will be necessary to enable the Admiralty to take the first steps towards carrying their arrangement into effect. Should it not succeed, no portion of the money voted will be expended. It is, therefore, for a conditional vote only, that the Naval Department will have to ask.

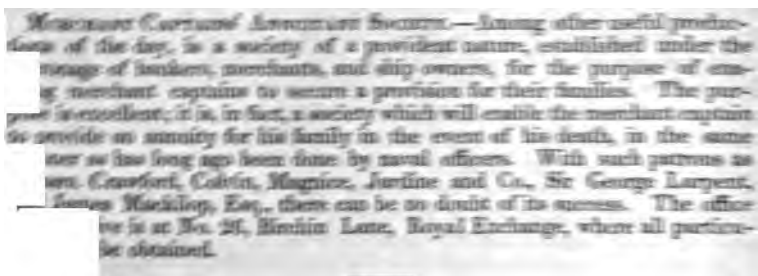
HADDINGTON.

IMPROVED COMPASS.—There were few articles of a ship's furniture that were more susceptible of improvement than the compass; a subject which Mr. Dent, (who is already at the head of his profession, as a chronometer-maker,) has taken up with complete success. In our last volume we gave Mr. Dent's own account of his views of the improvement of which the compass is susceptible. Since which he has constructed several. Reports have been made by Captain Washington, in H.M.S. *Blazer*, of its efficiency at sea, and by Capt. Sir Thomas Hastings, of its perfect freedom from motion when subjected to the firing of cannon, and also the rapid and sudden movements of a boat under all of which circumstances it continued perfectly unagitated, and true to *its own course*, while the ordinary compass behaved as ordinary compasses do, and in a manner which seamen know well enough without describing.

In a future number we hope to say more on this subject, but we do not hesitate in congratulating seamen on the prospect of their, at length, having a perfect compass, and Mr. Dent in having produced it.

GALVANIZED IRON, the virtue of which is that it is free from corrosion under the ordinary circumstances, which render iron useless. We have before us a prospectus of the Patent Galvanized Iron Company, the important attractions of which are supported by the signatures of scientific men, as well as merchants, the secretary and surveyors to Lloyds' and others. The attractions to which we allude, are first in sheathing ships, which can be done at about one third the price of copper, the perfect efficiency of which is certified by Messrs. Robertson and Alexander, and Mr. Ballantyne, ships





August Regattas of the Royal Yacht Clubs.

4th, 5th, and 6th.—*Royal Victoria Yacht Club* Regatta, Ryde. This was formerly but a few weeks since, naming the third in its opposite list.

6th and 7th.—*Royal Southern Yacht Club* Regatta, at Southampton.

August 7th and 8th.—*Royal Northern Yacht Club* Regatta, at Inverness.

12th to 16th.—*Royal Yacht Squadron* Regatta, at Cowes.

26th, (Prince Albert's Birthday.—The *Royal Western Yacht* Regatta will commence at Plymouth, and be continued on the following days.

account of the Regatta for 1844 appeared in the last volume of the *Mirror*. Any vessel belonging to a Royal Yacht Club may race for the Cup at Plymouth.

The Experimental Squadron.—Our limited space will only allow us to record the departure of the Experimental Squadron under the command of Admiral Parker in the *St. Vincent*, on Tuesday the 15th of July. On going to sea from Spithead they had the gratifying honor of being led by Her Majesty, in the Royal Yacht, the *Victoria and Albert*, which vessel returned in the evening, and the Queen repaired to the Isle of Wight.

On the following day the squadron was seen off Brixham, about twenty miles to leeward, working down Channel in two divisions, as on starting, the Admiral in the *St. Vincent*, 120, leading the starboard line, and Capt. Willis, *Howard*, 80, the port line. In the former line *St. Vincent*, *Queen*, 110, *Hibernia*, 90, were sailing well, but *Trafalgar*, 120, had a great press of sail to keep her station as the second ship. In the other line *Vanguard*, 80, *Canopus*, 84, were sailing well, but *Canopus* had carried away her foreyard in reefing topsails. *Rodney*, 92, not sailing quite so well as the second *Superb*, 90, considerably astern.

The following Table shews the relative capacities of the different vessels:—

Names.	Guns.	Tons.	Number of Men.		Water in tons.		Weeks' Provisions.
			Allwd.	Victualled.	Can Stow.	On Board.	
St. Vincent	120	2,612	840	705	530	504	21
Queen	110	3,103	776	739	522	500	21
Trafalgar	120	2,694	840	681	512	507	21
Albion	90	3,099	705	655	432	431	26
Rodney	92	2,625	705	619	435	410	21
Canopus	84	2,357	645	517	420	404	21
Vanguard	80	2,589	645	577	358	351	20
Superb	80	2,589	645	607	467	428	21

New Books.

An Inquiry into the Nature and Course of Storms, *in the Indian Ocean, South of the Equator —By Alexander Thom.* Smith and Elder, Cornhill, 1845.

When we inform our readers that Mr. Alexander Thom is Surgeon of the 80th Royal County Down Regiment, that Colonel Reid, with whose work on this subject they are familiar, is an Engineer Officer, that Mr. Piddington who, in India, is working in the same cause as these gentlemen, is Secretary to the Asiatic Society, they may well ask what are our naval officers about? It is truly said there is no accounting for taste. Hurricanes may blow, and soldiers may investigate their laws and phenomena, and tell sailors how to avoid their effects; notwithstanding this may be reversing the order of things. But we must not waste our space.

The work before us is most valuable to seamen. Leaving Redfield to look after the hurricanes of his own coast, and Colonel Reid to see to those of Bermuda, Mr. Thom gives us the result of his observations at the Mauritius, a station which is peculiarly well adapted for observing those of the Indian ocean, the ravages of which, seamen have annually experienced; and those observations, combined with the results obtained by an indefatigable enquiry into the hurricanes experienced by vessels, as they arrived occasionally in a shattered condition at the island, have entitled him to the gratitude of seamen, who may now profit by them. They may first learn where and when they prevail, and the course they follow, and by that means may know how to avoid them always; next, should they be overtaken by them, a careful consideration of the theory will teach them how to get away, how to avoid their fury, and prevent their falling into the vortex of the gale. And again, are they inclined to look into the subject, and observe the phenomena for themselves, they have before them one of the most interesting collection of facts we know of for their assistance.

The general sameness of the character of these hurricanes was soon perceived by our author, who, with the resources of a man of education, has looked further into the subject than his predecessors in this field of enquiry, and has arrived at establishing "*a why for a wherefore*," a first great cause of the phenomena, periodically and locally regular. He at once banishes from our minds all thoughts of continents, direction of coasts, or chains of mountains, and points to the monsoon and the trade wind, charged with opposite kinds

of electricity, and blowing in opposite directions, as the two grand sources of the revolving hurricane!

To say the least of it, the theory is rational and philosophical, but to us it is most satisfactory. We see now why in the N.W. quarter of the Mauritius hurricane there is more electrical discharge; simply because there is the brush with the monsoon; why the West India hurricane pursues its course mostly up the gulf,—by reason of the prevailing S.W. wind across the continent of America; its gyratory action,—the calm in the centre. But we must leave our readers to judge for themselves.

There are important considerations for seamen in the work before us, and in our opinion the nature of hurricanes should be the study of every seaman, as he is unfit to command a ship who is ignorant of it, for this plain reason, that when he is overtaken by one, while his crew and every one on board is looking up to him as their guide and governor, he will run his ship before the gale, round and round the vortex, like those in sundry diagrams in the work before us, and like others founder under its fury, while by shaping a timely course, a few hours run would take him clear of it.

There are many points which for want of space we have not touched in the work before us, but to which we may return on some future occasion.

MEMOIRS OF THE NAVAL WORTHIES OF QUEEN ELIZABETH'S REIGN.—*By John Barrow, Esq., F.R.S.*—Murray, London.

Mr. Barrow enjoys the good fortune of having contributed in no slight degree, to the naval history of his country. Notwithstanding his official occupations, he has already penned down his route into some distant parts, and amused us with his anecdote and observation. But the most professional, we were going to say, if not the most valuable of his occupations, are the results of his examination of state-paper documents, such as those we find in the work before us. The naval worthies of Queen Elizabeth's reign, a period of no ordinary importance in the annals of this country, and one teeming with adventure and discovery, was wisely selected by Mr. Barrow for his investigation; and he soon mastered the principal difficulty which lay in his way, that of deciphering the MS. character of those early days. He has collected from documents hitherto unpublished, interesting narratives of Frobisher, Davis, Gilbert, Hawkins, Drake, and many other men, whose noble deeds stood forth prominently in the early times in which they flourished. We shall make it our business to snatch a page or two now and then from this interesting work; among others the account of the first Naval Court Martial on record, at which Sir Francis Drake presided, on the 20th May, 1587, which would be too long for our present space.

NEW CHARTS.

Published by the Admiralty, and Sold by R. B. Bate, 21, Poultry.

CAPE THREE POINTS, *Axim Bay, Cape Coast Castle, by Capt. Vidal*, 1837, Price 2s.

CHARLOTTE TOWN, *Prince Edward Island, by Capt. Bayfield*, 1843, 2s.

CAPE HAITI HARBOUR, *Com. Barnett*, 1840, 1s. 6d.

DIRECTIONS FOR DEMERARA *and Berbice Rivers, by Mr. Petley, Master, R.N.*

DOVER BAY TO WINCHELSEA, *by Capt. Washington, corrected to* 1844, 2s.6d.

CAPE KATAKOLO TO VENETICO, *by Capt. Smyth*, 1825, 2s.

VENETICO TO CAPE MALCA, *by Capt. Smyth and Graves*, 1825, and 1844, 2s.

CHALEUR BAY, *by Capt. Bayfield, with plans*, 1839, 2s.

Wrecks of British Shipping.

Continued from p. 327.—cs. crew saved; cd. crew drowned.

VESSELS' NAMES.		BELONG TO.	MASTERS.	FROM.	TO	WRECKED.	WHEN.
Ann and Mary	146	Stockton	Flinton	Southampton	Mirimichi	C. Bollard	May 30 cs
Ann Jane		Greenock	———	Mobile	Quebec	Gr. Bahama	May 15
Anna Bella		———	Gardner	Liverpool	St. Johns N.	Atlantic	May 10 cs
Argyleshire		Greenock	Scott	Glasgow	Chaleur B	Newfo'ndlnd	May 1d
Auxiliar	150	N. Shields	———	Carthagena	N. America	By ice	May 26
Border Chieftain		Berwick	Maltman	Newcastle	Dublin	Off Wick	July 4
Cordelia		———	Hamilton	Ichaboe	Belfast	15°N; 35°W.	May 30
Carlson		Glasgow	———	abandoned	in Gulf of	St.Lawrence	May 25
Chieftain		———	McMein	Ichaboe	Liverpool	St. Georges	May 17 cs
Cottager	155	Newcastle	———	Saldanha B.	———	Saldanha B.	Ap 8 2d
Diamond		Belfast	Dempsey	Cardiff	———	Burry R.	June 8 1d
Eliza Ann		Cork	———	———	———	———	———
Harriett		Swansea	Cock	Berwick	Plymouth	Bognor R.	July 1
Hazelrig		Newcastle	Short	Malaga	Quebec	Fuengerda	June 10
Helena	160	Perth	McLaren	Rouen	Newcastle	Run down	July 6 cs
Hope		London	———	———	———	———	May 19
Jane		Glasgow	Rhodes	Leghorn	Dumfries	———	July 5
Jupiter		Scarboro'	Seamau	Scarboro'	St. Johns N.	Foundered	May 2
Lamport		———	———	Liverpool	Quebec	Cow B. Hd.	May 19
Mersey	165	———	———	Cork	Quebec	———	May 20 cs
Oscar		Topsham	Barrett	Topsham	St. Johns N.	not heard of	May 2
Palanquin		———	Mara	Liverpool	Bombay	Maldives	Dec. 20 cs
Priscilla		Aberystwith	Parry	Brookles	Gloucester	Capsized	June 22
Rhydal		Aberystwith	———	Aberstywith	Quebec	By Ice	May 4
Rosebud	170	———	Montgory	Belfast	Quebec	Scatterie	May 19 1d
Rosebud		Belfast	Faulkner	Cardiff	Cronstadt	I. Skye	June 20 cs
Sapphire		Newcastle	Hall	———	Nova Scotia	C. Northway	May 19
Thomas and Mary		Sunderland	Marlee	Sunderland	Quebec	Atlantic	May 3
Triton		Harrington	Edkin	Liverpool	Wick	Sandy I.	June 26
Vanguard	175	Whitby	Rose	———	———	S. Paul	May 18
Uruguay		———	Kelso	Liverpool	China	By fire	June 19

148—Abandoned in the ice, in lat. 48°, long. 47°, crew saved by Alert.
150—Crew saved by the Allison, Morrison, for Shields from Quebec.
152—Sprung a leak and foundered.
157—Crew and passengers landed at Quebec May 16th, having struck the ice in lat. 48°.
159—On Coast of Spain, struck on a "bed of rocks" at Calabura, about 20′ W. of Malaga.
161—British Queen stopping by her to receive the crew.
162—Crew had only time to get into boats.—Saved by the Alfred after being five days in them without oars or provisions. Two to suffer amputation.
164—Wrecked at So. Woodland, New Jersey, about 30′ south of the Hook, she was via Boston to land Passengers.
165—She was spoken near the Banks, and is feared to be lost amongst the ice.
166—See account in p. 381 last Number.

Monthly Record of Naval Movements.

Acorn, 16, Com. Bingham, April 1, at Buenos Ayres; *Actæon*, 26, Capt. Mansell, April 5, at St. Helena, May 7, sailed for Cape; *Agincourt*, 72, Capt. W. H. Johnstone, with flag of Rear-Admiral Sir T. Cochrane, April 9, arr. at Penang from China; *Alligator* 26, at Trincomalee April 22; *America*, 50, at Callao 10th April.

Bittern, 6, arr. at Simons Bay, April 18, from Quillimaine, 9th July, arr. at Sheerness, on way to Chatham to pay off.

Carysfort, June 26, paid off at Portsmouth; *Calliope*, July, com. at Devonport; *Cambrian*, 36, Capt. Chads, April 2, left Madras for England; *Collingwood*, 80, at Callao April 10th; *Crocodile*, com. at Sheerness, June 26, by Capt. Manfield, for flag-ship at Cork.

Eurydice, 26, May 20, left Vera Cruz with despatches; *Firebrand*, 8, Capt. Hope, April 22, left Rio for Monte Video; *Fox*, 42, arr. at Trincomalee, April 22, from Bombay.

Herald, surv. v., Capt. Kellett, sailed from Plymouth July 26, for Pacific; *Hermes*, st. v., June 13, at Jamaica; *Hecate*, st. v., Com. Bower, sailed for Madeira and coast of Africa.

The *Heroine*, 6, arr. at Devonport, from the west coast of Africa, has brought some of the murderers of Mr. Harmer, the midshipman of the *Wasp*, and the seven poor fellows who were in charge of the prize slaver. She has three of them on board, a Frenchman, a Portuguese, and an African, who it is said are willing to be admitted as Queen's evidence against their miscreant bloodmates. The remainder of the wretches were left by the *Heroine* on board the *Tortoise* at Ascension, heavily ironed; they are now on their passage to England in the *Rapid*, 10. The *Heroine* left Ascension on April 18th; July 10th, paid off. The names of the officers and men who were risen upon and murdered whilst in charge of the Brazilian schooner, *Felicidade*, on 3rd March last are as follows; Mr. Palmer, midshipman; J. Mullens, A.B., E. Marshall, A.B., J. Mitchell, A.B., T. Barfoot, A.B., J. Beynon, Ord., G. Godding, Ord., T. Gould, private Royal Marines, third class; J. Andrews, krooman, J. Wilson, ditto.

Iris, 26, Capt. Mundy, March 18, at Hongkong; *Modeste*, 18, Com. Bailie, Jan. 6, at Tahiti; *Mutine*, 12, in Simons Bay, April 22; *Melampus*, 42, arr. at Madeira May 28th, 29th sailed for Brazils.

North Star, 26, Capt. Sir E. Home, March 11, left Sydney for New Zealand, 25th March at Bay of Island.

Pandora, surv. v., Lieut.-Com. J. Wood, July 26, sailed for Pacific. A melancholy accident occurred by which six lives were lost, A boat belonging to the *Pandora*, with nine women and two children, besides the boat's crew, were on their way to Mutton Cove to land the women, who had been on board the *Pandora*, (under sailing order) to take leave of their relatives; when near St. Nicholas's Island, by some mismanagement the boat was capsized, and it is with pain we state that four women and the two children perished. *Pique*, June 8th at Barbados; *Persian*, 16, arr. Port Royal June 3rd, 9th sailed forVera Cruz.

Racehorse, 18, May 18, arr. Tenerife, to sail on 20th for China. *Rapid*, 10, in charge of Lieut. Wilson, July 3, arr. Plymouth with ten of the crew of the slaver, who murdered Mr. Palmer, midshipman, and eight men of *H.M.S. Wasp*; who, after due examination, have been committed to Exeter gaol to await their trial. By a letter to the *Trinidad Spectator*, dated Sierra Leone, 14th April, 1845, it appears that Commander Earle, of *Rapid*, had died and was buried at that place on the Saturday previous.

Salamander, st. v., Jan. 6, at Tahiti; *Scylla*, 16, Com. Sharpe; *Serpent*, 16, at Trincomalee, April 22; *Spartan*, 26, left Quebec on June 9 for Newfoundland; *Styx*, st. v., Com. Hornby, June 2, at Madeira; *Spy*, 6, Lieut. Woolridge, June 30, sailed for South America.

Thunderbolt, Com. Broke, May 8, at the Cape; *Vindictive*, 50, arr. at Halifax June 18; *Vernon*, 50, Capt. Fitzgerald, June 26, sailed from Spithead for Brazils, for flag of Rear-Admiral Inglefield.

Wolverine, 16, Com. Clifford, arr. at Penang from China, April 9; *Winchester*, 50, at Simons Bay April 2, and May 8.

PROMOTIONS AND APPOINTMENTS.

(From the Naval and Military Gazette.)

PROMOTIONS.

The promotions consequent on Her Majesty's visit to the squadron at Spithead are Lieuts. H. Tause, J. Cheere, and W. F. Fead to the rank of Commander.

RETIRED CAPTAINS—D. Roberts.

LIEUTENANTS—C. M Shipley, C. A. Lafargue.

SURGEONS—J. Stirling and J. Burke.

Appointments.

Captain—Sir R. Leeke KH., (1826) to *Calliope*.

Commanders—C. F. Schomberg to *Queen*.—P. Helpman to study at Naval College.

Lieutenants—G. Harvey (1824) to *Hibernia*—S. Fowell (1842) and R. C. Whyte (1840) to *Crocodile*—J. H. Boyd (1845) to *St. Vincent*—C. Carter (1840) to *Canopus*—L. Burrell (1845) to *Superb*—L. Tonge (1845) to *Trafalgar*—L. B. Mackinnon (1842) and R. M. Sandom (1843) to *Vanguard*—H. C. Toby (1841) and M. Bourchier (1841) to *Queen*—J. M'Donnel (1826) to command *Nautilus* C. R. Marcuard (1840) to *Driver*—A. Cumming to *Albion*—T. Cochrane (1844) to *Collingwood*—R. Percival, W. South, and J. Brown to be agents for Mails—A. P. F. Wilmot to be flag-Lt. to Vice Adm. Parker.

Masters—E. Rowe to *Driver*—E. J. Pearn to command *Athol* troop ship.

Mates—W. W. Addington, S. T. Dickinson, G. A. Balfour to *Hibernia*—The Hon. J. R. M. Byng to *Victoria* and *Albert*.

Second Master—F. Wise to *Queen*.

Masters Assistant—W. Osmond to *Hecate*.

Midshipmen—W. B. Elphinstone to *Superb*—G. W. Fead to *Trafalgar*.

Naval Cadets—G. Goolden to *Canopus*—N. Cornwall to *Queen*—E. Douglas to *Siren*—G. Bunbury to *Resistance*—H. Robinson to *St. Vincent*—M. Smithett to *Comus*.

Surgeon—R. Pritchard to *Hibernia* J. Rees to *Curacoa*.

Assistant Surgeons—D. Synie to *Hibernia*—C. Douglas to *Vernon*—J. Jeffcott to *Penguin*.

Paymaster and Purser—R. Parker to *Albatross*.

Clerks—G. C. Burney to *Alert*—T. W. Shanks to *Albion*—G. B. Eales to *Cuckoo*—T. Fitzpatrick to *Agincourt*.

Coast Guard.

Appointments—Com. E. Holland to Ballycastle—Com R. Mann to Kilrush District.

Removals—Lieut. H. N Atkinson to Portsmouth—Mr. F. P. Coull to South Yarmouth—Mr. J. Willcox to Barrys Cove—Mr. J. R. Williams to Mucking Creek.

Marriages and Deaths.

Marriages.

At St. Pancras, June 24, Captain M. Dixon, R.N., to Mrs. Wilhelmina Cheape

At St. Georges, Hanover Square, 2nd July, W Logan, Esq., to Sophia Jane daughter of Capt. F. J. Bellew, H.C.S.

At Bath, Lieut. S. Moorish, R.N., to Mary, daughter of the late Captain J. Mackeson, of Jamaica.

At Kingston Church, Portsea, J. S. Wadeley, Esq., to Francis Maria, daughter of Captain P. W. Prichard, R N.

July 1, at St. Georges, Hanover square Capt. Hill, R.N., to Amelia Jane, eldest daughter of H. P. Boyce, Esq.

Deaths.

At Cottrel, Glamorganshire, June 20 Alfred, son of Sir G. Tyler, K,H., R.N. aged 18 years.

At Millbrook, near Southampton, 22d July, Selina, only daughter of Captain C. Owen, R.N.

At Seaham, Lieut. Dangerfield, RN.

May 29, Coast of Africa, Lieut. W. Wilson, of the *Lily* sloop.

Lieut. F. Hennah in command of the Thorney station, Sussex.

At Ascension, Surgeon P. Brenan.

A monument has been erected at Hong Kong bearing the following inscription:—

"Sacred to the Memory of Augustus Percival Greene, F.R.A.S, Lieutenant of H.M.S. Plover, who died on board that vessel on December 2d, 1844. This monument was erected by those who valued the services, esteemed the character, and deplore the loss of an able companion in the surveys of these seas."

Quarterly Naval Obituary.—*Admirals*—Sir C. H. Durham, G C.B., J. Carpenter, Sir D. Milne, G C B., H. Raper; *Vice Admiral*—Sir J. C. White, K.C B. *Captains*—R. Harward, Earl of Egremont, C. H. Paget, E. Blankley, J. C. Tullige J. Treacy. *Commanders*—J. Hamilton, C. Bell, J. M. Bate, E. N. Greensword, J. McDonald. *Lieutenants*—G. R. Godfrey, E. Lecfimere, N. Troughton, G. A.

Leary, C. Bagot. W. G. Buchanan, M. McNeale, C. A. Thorndike, I. Maling, G. D. Briggs, T Anson. *Masters*—J. Tucker, J. Burnett, J. Tilley, J. Davis, A. Crawford, J. T. Watson, R. Stewart, A. W. Quinlon, T. S. Morgan, J. L. Wilkinson. *Mate*—W. R. Surridge. *Chaplains*—W. Salter, J. H. Sheed. *Surgeons*—E. Edwards, T. Hooper, J. Long, R. Green, J. Adie, J. R. Rees. *Paymasters and Pursers*—E. Bate, D. Sparshott, P. J. Stokes, R. J. Smith, J. Kain, J. Renton, S. W. D. Fores. ROYAL MARINES—*Lieut. Col.*—G. Marshall, E. A. Toomer. *Captains*—F. Waters, T. Quested, C. R. Miller. *First Lieutenants*—M. Graham, J. P. N. F. Clapperton. *Second Lieutenants*—J. Ward, R. Davies, T. Thomson.

METEOROLOGICAL REGISTER.

Kept at Croom's Hill, Greenwich, by Mr. W. Rogerson, of the Royal Observatory.
From the 21st June, to the 20th July, 1845.

Month Day.	Week Day.	Barometer.		Fahrenheit Thermometer, In the Shade.				Wind.				Weather.	
								Quarter.		Strength			
		9 A.M.	3 P.M.	9 A.M.	3 P.M.	Min	Max	A.M.	P.M.	A.M	P.M.	A.M.	P.M.
		In Dec	In Dec.	o	o	o	o						
21	S.	30·16	30·10	64	72	52	74	NE	NE	2	2	b	bc
22	Su.	29·98	29·94	65	73	53	75	NE	N	2	2	o	bc
23	M.	30·15	30·18	58	66	49	69	NW	NW	4	4	bc	bc
24	Tu.	30·07	29·91	65	67	53	71	SW	SW	4	6	bc	qbcp (3)
25	W.	29·84	29·86	60	66	52	68	NW	NW	5	5	qbc	qbc
26	Th.	29·83	29·87	59	64	52	68	NW	NW	4	4	bc	bc
27	F.	29·78	29·70	59	59	53	61	S	S	4	4	or (1) (2)	or (3) (4)
28	S.	29·28	29·38	60	62	56	64	SW	NW	5	7	qor (1) (2)	qbc
29	Su.	29·91	29·95	55	69	44	70	NW	SW	3	3	bcm	bcp 3)
30	M.	29·89	29·92	60	67	51	58	SW	SW	5	4	qbcp (2	bcm
1	Tu.	29·66	29·63	61	67	55	69	SW	SW	6	6	qor (2)	qbc
2	W.	29·86	29·90	63	67	53	68	SW	SE	4	2	o	or (3)
3	Th.	29·76	29·74	73	80	55	81	S	S	1	3	bctp (2	bc
4	F.	30·06	30·12	64	72	55	73	SW	SW	4	3	o	bc
5	S.	30·26	30·27	60	70	53	71	S	SE	2	2	bc	bc
6	Su.	30·10	30·06	70	78	54	79	E	E	3	3	bc	bctl
7	M.	30·00	30·02	72	82	64	83	W	W	2	2	b	bl
8	Tu.	30·00	30·00	63	73	59	75	W	SW	2	4	o	bc
9	W.	30·04	30·00	64	66	56	68	SW	SW	4	4	bc	bcp (3
10	Th.	29·85	29·80	59	61	55	63	SW	SW	2	3	or 2)	o
11	F.	29·60	29·60	65	63	55	67	SW	NW	2	3	o	opt (4)
12	S.	29·92	30·01	56	63	48	65	NW	NW	4	4	bc	bcm
13	Su.	29·90	29·91	58	69	52	70	S	W	2	3	od (1) (2)	bc
14	M.	29·92	29·96	62	65	55	67	NW	NW	4	4	bc	bcp (3)
15	Tu.	30·09	30 07	58	64	51	66	N	NW	2	2	bc	bc
16	W.	30·06	30·04	58	69	48	70	NW	SW	2	2	bm	bc
17	Th.	29·91	29·94	65	67	55	68	S	SW	4	4	or (2)	bcp (3
18	F.	30·10	30·12	56	75	60	76	SW	SE	2	2	bcm	bc
19	S.	30·09	30·07	63	72	61	73	NE	NE	2	2	bc	bc
20	Su.	30·05	30·07	60	63	55	64	NE	NE	4	4	bc	bcr 4)

JUNE 1845.—Mean height of the Barometer=29·964 inches; Mean temperature =61·3 degrees; depth of rain fallen 2·03 inches.

TO OUR FRIENDS AND CORRESPONDENTS.

We have inserted Mr. Godby's letter, and shall be obliged to him if he will send us any extracts from his log relating to the Raven Islands, that may serve to place seamen on their guard respecting them.

We are obliged to our correspondent for his account of the removal of the seat of Government at the Falkland Islands, and shall always be glad to hear from him.

The following articles are unavoidably postponed until next month—"Extracts from the report of the last Meeting of the British Association," &c.

We are compelled to reserve the communication on "Bermuda."

We have communicated with our Correspondent on the "Merchant Service."

HUNT, Printer, 3, New Church Street, Edgware Road.

Voyage of the Albatross.—(*Royal Yacht Squadron*).—*From Van Diemen Land to Cowes, by Cape Horn.*—1845.*

Nothing of importance occurred in our route from Hobart Town to Port Nicholson, more than the increase of distance, and a little unexpected delay. From Port Nicholson we had two days' run to the Chatham Islands.† At four in the morning we ranged about a quarter of a mile to the westward of the west reef, for which we had been on the look-out all night, and upon which the sea broke very heavily. From its appearance I should consider it five or six feet under water, and about a quarter of a mile in its extreme length. Passing about two miles westward of the Sisters, two bold rocks, or islands, we followed the track of Capt. Broughton in 1797, keeping within two miles of the eastern side, which is slightly indented with sandy bays offering no anchorage, but where shelter might be had from the southern or western gale by standing off and on as it was our lot to do, wind blowing a very hard gale at south. In the evening we steered off shore, and at midnight shaped our course for the Horn, under close-reefed topsails and storm jib. At daylight we passed a large vessel bound to the eastward, under close-reefed topsails. When this gale was over we had calm and cloudy weather, succeeded by strong easterly gales, and we much regretted our passage did not lie to the westward, as there is little doubt but the better passage is to be made to the westward by vessels leaving the Colonies from the beginning of November to the first week in February.

January 29th, in lat. 48°, long. 159°, finished our easterly and north-easterly weather, the barometer indicating the change by its depression in six hours from 30 to 29·50, the wind flying about from N.W. to S.W., and the fluctuations of mercury being from 29·50 to 29·30; and now came the *high dawn*, daylight breaking between altitudes 40° and 50°, over bodies of unbroken nimbus, dark and dirty. The exhibition overhead during the forenoon being straggling flakes of the conoid, with their inseparable partners, the cirro-stratus, or the part of it known to seamen as the mackerel sky; by the conoid is understood the Mare's Tail. However, we hailed such prognostics with a good grace, and con-

* We are not given to over estimating the value of our productions, or troubling the reader with the concerns of the *Nautical*. But it was impossible not to feel a little honest pride on reading the postscript of the letter which accompanied the MS. of the above narrative; and in justice to ourselves, as well as to shew that we equally appreciate the writer's opinion, we shall take the opportunity of recording it.

The letter is dated at Kensington, July 7th, 1845; the postscript runs thus; "The first time I saw the *Nautical Magazine* was about 1840. Several of us were at tea on board the Magnet, Capt. Mann, Port Philip. It caught my eye for the first. We all struggled for it. After tea it was put up by auction in the cabin. It fell to me at £2 15s.; the numbers for 1839, and some of 1840. "J. M. Gill."

We do not think that even the choice expressions of Mr. George Robins himself could have done more for it than its own humble merit did on this occasion.

† See an excellent Chart of these islands published by the Admiralty.—Ed.

sidered this as the beginning of our passage, travelling as we were at the rate of ten knots under reduced canvas.

It is here where the mariner may study and depend on the barometer. This was our first western breeze, and as regular as the gale veered from the northward to the southward of west so the column rose, and from southward to northward the indicator was depressed, the changes being being 29·30 to 29·70. With this breeze finished the moon, and if change of weather is to take place in this quarter of the globe with change of moon, it is, that light winds veering to the north and east bodes the day of change ; or the last moon ending with strong westerly gales no change may be expected till the third day of the new moon : and this was our case, or rather this was the nature of the weather, and the third day of new moon was advancing with sinking barometer.

February 8th was moderate but still a gale, the display around us being many folds or columns of densely packed nimbus crowding and closing in the horizon every where around us, to the altitude of about thirty degrees. From forty-five to the zenith were those unwelcome characters the conoid, the cirro-stratus, the cumulus, with every variety of ill-looking cloud that could possibly exist between us and the sun. Appearances like these with the barometer falling one-tenth per hour, for five hours in succession, the wind veering in squalls from S.W. to N.W. gave full notice that the elements were brewing something grand and terrific against us.

The trial was now coming for the "Pretty little thing !" "Fit for smooth water !" "Very well in fine weather !" Such were the remarks passed on her in port, but we were now clear of the eyes of those observers, a lone solitary little dark speck on the ocean, with taffrail 4 feet 4 inches from the level of smooth water, (deck at the gangway, 2 feet 2 inches,) under the lee of which there was not shelter for a fly, and here we were scudding away before seas already running in size like little islands, fifty times larger than ourselves.

At 3h. 30m. A.M. on the 9th we rounded to with our head to the N.N.E., barometer being at 28·28, thermometer 47° ; the gale was at north-west and northerly in squalls, thick, dark, and rainy ; the sea ran with great violence, and here she rode and drove as gracefully as any "albatross" in the South Pacific, and were it not for the constant and cutting spray that flew over in rapid succession, we might say comfortably. Within the last twenty-four hours the mercury had depressed one and one-tenth of an inch.

I must here remark that, in registering the barometer I find it a useful practice I adopt, in noting its rate of depression, per hour, four, twelve, or twenty-four hours, and to rule a column in the Journal headed R.D. showing the rate of depression per hour ; to this add veering of the wind, and in this part of the world it will be invariably found that as the wind veers to the northward, from the southward of west, decrease of mercury will be quickest and lowest, and coarse weather may be expected ; but should the wind veer in this direction without a depression the column it will be likely, either to stand or increase. The contrary ing of barometer with reverse veering of the wind produce the finest er, although the gale shifting rapidly from N.W. to S.W., very qualls may be expected unless the column rise one or two tenths

per hour, the gale will finish in a few hours. Of this I could give many instances from careful observations.

Returning, however, to the gale which raged with great fury at N.W. until 6 P.M., when it flew suddenly to W.S.W., and blew with increased force. The sun having been concealed during the day, now shone out a few minutes nearly in the wind's eye of us with fiery brightness, which some of us thought for the last time. The small archway that opened to windward through dense masses of cloud served the purpose of a funnel, and forced the gale (if it was a gale,) over us in gusts, every one of which appeared determined to tear away the few yards of canvas we had set; strong, stout, and new as they were.

The heavy cross sea produced by the sudden shift was all foam and spray, like a boundless tide-rip; and for some time created an alarm for the worthiness of our little sea-boat, but nothing, the produce of man's labour, could have felt the change quicker than herself, coming round to it like an arrow. The first cross roller seemed bent upon her destruction as she cut through it with her long, small, and sharp round bows and bowsprit, the sea tearing its way over the masthead, sweeping up the storm jib, which we looked upon as gone. As she was now end on to such breakers, her plunge aft, as she stood an end, was truly frightful, as every dip brought about eight feet of her afterpart under water. We had but one unwelcome visitor, that made up close to windward, and slapped itself on board the whole length of the vessel; for a few seconds the decks were full, but being already with our lee ports up we were soon eased of its weight. It was now for us to remedy the plunge aft, as every four or five minutes she settled well down, the cross seas rushing over the whole after part, her bows having an extra elevation in the air. The stream chain, and other heavy weights, stowed under the after cabin were removed into the main cabin, and this little alteration in her trim had an immediate and wonderful effect on her. The vessel became easy and lively, such seas that formerly rushed over her abaft were now cleared with the greatest ease.

As soon as I could leave the deck for a moment, which was about two hours after the change of wind, the barometer had ascended from 28·28 to 28·36; by midnight it rose to 28·66; but at 1 A.M. the squalls veered from W.S.W. to W. and the column depressed to 28.58.

By 5 P.M. of the 10th the indicator showed 28·70 as the breeze veered gradually to the south-west, and we bore away before that kind of sea that no man would suppose we could live in. But scudding is our grand point, it was in vain that we all stood watching the audacious destructive curlers abaft, she was over them like a feather. The altering of trim improved her running, as she rose aft with greater buoyancy, requiring but the slightest touch of the helm, for it was upon the quick and proper application of this, that our safety depended.

Midnight of the 11th barometer had risen slowly to 29·10, the squalls still violent, accompanied with hail, had decreased; thermometer to 40°. Our trysail hitherto had held on remarkably well, now became shattered in a squall; the gale continued moderating, and contrary to general practice, veered against the sun from S.W. to N.W., the column rising to 30·34, with light north-east airs and fine weather, our position being 53° 30′ S., 96° W.; we had now two other days to prepare for the next

breeze, and this we expected, and were not deceived at the coming of the full moon on the 22nd. We had the usual figurations among the clouds (which is always as well to observe,) the cirro-stratus, as before, of long horizontal dimensions, not of the changing kind, but stationary at the altitude of about 70°, with its general attendant in the zenith, that variety of cirro-stratus termed the mackerel sky. The wind veering from west to north, heavy rain, and the depression of the barometer being one inch in twenty-four hours, from 29·60 to 28·58.

On the 23rd we exchanged colours with an American whaler standing to the westward. Being pretty close, we hauled our wind for the purpose of hailing her for longitude, as we had experienced a few foggy days, but unfortunately, as we came to the wind in the wake of her, the ship bore away. The weather at the time was heavy squalls with hail, yet she hung on to all her canvas, and as well as we could observe hands were laid aloft to out reefs; but as we had no desire to chase any one upon a lee shore, whom we were anxious to meet upon the score of friendship, we stood on our course, and left our acquaintance to do the same. It was difficult to conjecture why this ship avoided us, there could be nothing very formidable or forbidden in a small vessel under English colours, however, we put up with the disappointment.

Daylight of the 25th brought us in sight of another ship running to the eastward. On our showing colours he was kind enough to furl his foresail and fore-topsail, and brought his main yard to the mast: their longitude differed but one mile from ours, being 68° 46′ and 68° 47′; and our account by dead reckoning, carried on from the Chathams, independant of the chronometer, was 68° 58′. This ship was the George and Susan of New Bedford, Capt. George Howland; he had the goodness to enquire if we wanted anything, and merits our best thanks. We ran side by side with this vessel nearly the whole forenoon, the barque under two close-reefed topsails and foresail, ourselves under close-reefed trysail and storm jib.

We were now thirty-nine days from Chatham Island; five days light airs and calm, five days good weather with variable winds, and twenty-five days under close-reefed trysail and storm jib, had been hove to about forty-eight hours. The lowest settling of barometer being 28·25, and thermometer 39° of Fahrenheit, although summer.

It is probable that our appearance to all hands on board the George and Susan, must have been somewhat singular, running as we were frequently below the surface of the sea, for I think nearly the whole time of scudding together, the eyes of all appeared intently fixed upon us, and upon the waves that followed in our wake. She was lofty, buoyant, and comfortable; her taffrail being nearly the height of our mast-head; we were wet, cold and comfortless, had been so many days; and our means of drying was to stand well up the rigging, for half an hour between the squalls.

The following noon we parted company with our friends, passed through heavy tide rips of Point Fallows Staten Land, and the following morning spoke the whale ship Ann Mary Ann of Sag Harbour, Capt. Winter, and he being leaky arranged to accompany us to Port William. afternoon brought us in company with Ontario the Second, Capt. and the Oriyimbo, Capt. Bartlett of New Bedford, they were all early full ships from the north-west, having upwards of 4,000

barrels, not seventeen months out. They also agreed to keep way with us to Port William, where we intended to wood and water.

After a short consultation on board the Ontario, comparisons of six chronometers for time, placed us 104 miles nearly S.W.b.S. of the Beauchene Islands, accordingly it was arranged that we should run for them. The ships having formerly been American Liners sailed well: about 9h. 30m. P.M. we first put our head in the direction of the island, the breeze soon freshened into sharp squalls with hail, we scampered away under our usual lot of canvas—the close-reefed trysail and storm jib, and at 5 A.M. we passed the Beauchene about one mile and a half to the northward, Ontario passing about the same distance to the southward; thus in the short space of seven hours and a half we had tramped 104 miles, to which five per cent might be added for the griping qualities of a cutter going with strong wind quarterly, will be about 109. But at whatever distance per hour the vessels may have travelled at, it is but proper to remark, that a current or tide to the north-east of not less than four knots an hour was prevalent.

About 7 A.M. passed a brig five miles southward of us, standing to the south-west or westward, concluded by her show of streamers, to Ontario and consorts, to be H.M.B. *Philomel.*

In the forenoon a strong tide to the south-west was experienced, as it took us till seven in the evening to perform a less distance, we were inshore and ahead, our companions going per log of Ontario 11½ knots per hour. As we understood this to be a coast where straggling and sunken rocks were abundant, the vessels were well spread, with hands aloft for any thing that might turn up, but nothing was observed, so that it may perhaps be right to conclude that the directions stating the coast "southward of Berkeley Sound should not be approached too near, as it is surrounded with many low islands lying off shore, some of them out of sight of land," must be applicable to the western coast, as we saw nothing in nearly a direct line, which might be considered twenty miles. In our track from Beauchene, the weather remarkably clear, the four vessels about five miles apart, all of good draft of water; Oriyimbo drawing 19 feet, well adapted to scratch over a sunken danger. Off Port William the breeze left us at sunset, barometer rising, stood off shore under easy sail.

We had a fruitless search through the "Beagle's Voyages," for some description of, or instruction for entering Port William, for some account of the appearance of the coast, &c., but not the slightest information could be obtained, which is rather singular, as much of her time was spent at the Falklands, during her station in the South Seas.

We stood from the Port, the wind having failed us in entering, its bearing being N.N.W., four or five miles, stretching away S.S.E. and south for the off shore board, and W.N.W. and N.W. standing in. By three in the morning we had a strong south-western gale, confident, however, of fetching in to windward of the position we left in the evening, but to our surprise and regret at daylight the nearest land bore W.S.W. 8 or 9 leagues. As day advanced, the wind increased, and with it we had a high and confused sea from the tide-rips, that in spite of our own exertions, and the qualities of our little vessel broke on board her in all directions. Thus unexpectedly driven to leeward of our desti-

nation, our only choice was, either to lie to until the gale was over, or to bear up, while the wind was favourable, to some port in the Brazils, and unfortunately we decided upon the latter.

(To be continued.)

VOYAGE OF H.M.S. BLONDE, CAPT. F. MASON.—*Anchorage in Berkeley Sound.*—1834.

(Continued from p. 396.)

POINT Nelson N.E.b.E. $\frac{3}{4}$ E., Hay's Inlet E. $\frac{3}{4}$ S., entrance to Port Louis W.b.S. $\frac{1}{4}$ S., outer or eastern Sea Lion Rock W.N.W., Johnstone's Point N.W. $\frac{1}{4}$ N., (Magnetic bearing), 11 fathoms hard sand.

No facilities being afforded for observations, we do not attempt to give this place any position on our own authority. It is to be regretted we cannot do so, for being but little known, concurrent observations might be useful, and would have formed a kind of connection with the surveying squadrons' observations.

The rise and fall is stated at about six feet. It is said the tides have not much strength, even at springs ; at other times they appear but just perceptible.

Berkeley Sound, including Port Louis, is about nine miles deep, and four miles and a half broad, it lies east and west, is a fair, clear, and capacious inlet. Nearly half way up is the secure anchorage called Johnstone Harbour, the entrance to which is between Johnstone Point and the outer and eastern Sea Lion Rock. The Sea Lion Rocks form a long ledge from the shore, and show themselves as a line of detached black islets, or rocks. Johnstone Harbour is also strongly recommended by those acquainted with the localities of the place.

Johnstone Point is clear and bold, and a vessel intending to anchor in that harbour, cannot do better than run boldly in between the point and the Sea Lions, keeping the point on board, and chose her berth in from 9 to 5 fathoms. Entering the sound by night, keep along the northern shore, so as to be secure of having the soundings from that side. The point will be easily made out by the land receding immediately to the northward, unless indeed it should be extremely dark, in which case it will of course be matter of consideration, whether the Sound shall be entered or not.

When a ship has to call here, she must make the best use of every opportunity for making an anchorage before night, for in the vicinity of these islands, it is said, the weather is never to be depended upon, and the winds are described as notoriously baffling and stormy, so that a detention in the offing for several days, is not uncommon. We were fortunate, both coming and going : we anchored the same day we made the land, and we cleared the coast immediately on leaving the Sound.

At the head of the inlet is Port Louis, the entrance to which is between two islands. This is described as a secure place, sufficiently capacious to accommodate a number of vessels, also the most convenient place *for watering*. The little settlement is on its immediate shores. A handy

ship, cleverly worked, may beat either in or out, or, if the wind is adverse she may warp through, it is a good retreating place in the event of an easterly gale; were a ship at anchor outside with a leading wind, and daylight, there can be neither danger, nor difficulty in entering.

The land on both sides the Sound is hilly, and at this time was partially covered with snow, which assisted in giving the country a more barren and forbidding aspect than is strictly its character. No vegetation is observable except the long grass or fussack, for there is said to be nothing deserving the name of a shrub all through the islands.

The bottom all over the Sound is said to be good holding ground, stiff sand and mud, with some shells; in Port Louis more generally mud. Our anchor came up quite clear of soil, but as the ship never tightened the chain, it is probable the anchor had not turned in the ground.

In the Sound a ship should be moored with open hawse to the eastward, for an easterly gale would throw in much sea; but it is confirmed by experience that heavy easterly gales seldom or ever blow home here; but nevertheless, in the Sound, I would still moor in that manner; and in the event of a southerly gale, which may at all times be expected, a ship would only have to veer away on her best bower, so as to bring an equal strain on each cable. But in Port Louis, or Johnstone Harbour, all vessels as a matter of course should be moored with an open hawse to the south, at least half a cable either way, and a third anchor always in readiness.

A French whaler was lying wrecked at the upper end of Johnstone Harbour, she went on shore with only one anchor down, and top-gallant yards across, riding with 25 fathoms cable, and most of her crew on shore. The wreck was purchased by the surveying vessels for £300; which enabled them to refit the Beagle and her tenders. The hull being left, afforded the settlers a reasonable supply of fuel, and at present little more than her timbers remained.

The quantity of cattle on the East Falkland is variously estimated; it is, perhaps, difficult to come near the truth, the mean, including horses, seems to be about 12,000 head; there are none on the Western Island; but on several of the smaller islands hogs are in great plenty. The horned cattle are somewhat ferocious, and will attack persons even when mounted. The settlers keep a supply on Long Island for their immediate use. The beef is excellent; a carcase weighs about 250 lbs., for which ten Spanish dollars are paid, chiefly to the Guachos who capture them with the lasso. No kind of vegetable was to be procured, but in the summer months wild celery may be collected. The rabbits are excessively numerous, they are of a large kind, and good eating, and their skins are considered valuable; they may be shot, caught by dogs, ensnared, or dug from the earth to any quantity. The shores of Johnstone Harbour is a favorite resort for them. Birds fit for the table are also very abundant, particularly the upland geese, which are so stupidly tame, that they may almost be taken by hand. Fifty of these geese are usually shot by a single person in a few hours sport. Fish are particularly common in the summer months; the best kind is said to be the large kind of white mullet; in the winter months there are but few. Seals, sea lions, and other amphibiæ resort here. The Volunteer rock is a favorite resort for the former.

that is not been for the repeated interruptions of Spanish jealousy, and had some little support and encouragement been given to the settlements formerly established here and at the Western Islands, it is probable that at this day there might have arrived at something like consequence and not only have answered a moderate population, but would have become convenient and desirable occasionally to the vessels of every nation frequenting the Pacific: as things now are a large force must transpire, and a considerable outlay must be sacrificed, before any thing like a return could be effected.

The island being so well stocked with cattle and horses is one very sensible advantage. The soil is represented as good, and is capable of rearing all the more hardy kind of culinary vegetables, and being unencumbered with wood might easily be brought into cultivation. From the intemperance of the climate the maturity of grain may justly be doubted, but surely a return for the importation of that essential article might be found, in the fisheries that might be established in a place where the whale, and the whole tribe of cetaceous animals come in a manner to the very door of the settlers; these, and its other natural products, would create employment to many, and secure at least a competence to the islanders. Perhaps some use might be made of the kelp; if so, it is an inexhaustible provision.

The entire absence of timber is certainly a drawback, one that many years only would remove; it is easy to imagine that the same kind of trees so plentiful, and so luxuriant on the neighbouring coast of Tierra del Fuego, would likewise flourish here, if protected in their infancy from the rabbits, and planted in sheltered situations.

The coast of either island is described as wonderfully broken and indented, by which many eligible, and secure harbours are formed, settlements at each of which would rapidly rise in the event of the country becoming colonized. And if such ever does take place by the English nation, it is to be hoped that industrious, and well disposed persons only will be admitted, the introduction of any Buenos Ayrean Gauchos, or other vagabonds, would only poison the whole.

But, if colonization is not contemplated, might not the right of sovereignty be maintained, and the islands offered in grants to those who choose to settle thereat, for the dog in the manger system renders the islands useless and unavailable to every one. As things stand at present it is doubtful to whom the country belongs. England long since has claimed it, and has armed herself to assert that claim. The Spanish government disputed that right, and does still hold itself the lawful proprietor; and the Buenos Ayrean government, highly indignant at the British assumption, claim the whole as naturally appertaining to that Republic. It is true the English flag is now flying here, and an officer established as Resident remains there, with four seaman attached to him; but this party is, at times, (by being necessarily detached,) so completely in the power of the Buenos Ayrean and other strangers settled here, so insufficient to the protection of the cattle and other property, and so inadequate to curb the insolence and rapacity of the whalers, and other —ble that occasionally congregate here, that it is in reality unsafe for parties themselves, and by no means creditable to the country, that g should be displayed over a territory where there is no power to

maintain its respectability. And with regard to the few strangers already settled here, it is to be remembered, that they are chiefly of the same class, and country, with those lately concerned in the massacre of the few English residents, which they effected by surprise, and in detail.

It is, however, to be presumed, that the principal features and capabilities of these islands, are sufficiently known, and all that remains to be considered respecting them, is their position now when the trade of the Pacific, and the entire continent of South America, is in a manner starting up into a new existence, in the present altered state of things, the importance of the islands may be briefly considered under two heads; *Firstly*, would it be advantageous to commerce to have an establishment at either of the Falklands? *Secondly*, would it be a commanding point in time of war, to cover the trade of the South Sea, or to overawe the Buenos Ayrean Republic in the event of an eruption with that State?

(*To be continued.*)

SAILORS' HOMES.

WE have placed the above two words at the head of this paper, as embodying a meaning, and signifying in their most extended or most contracted sense, establishments of, we may briefly say, tremendous importance to England. The man-of-war's man has his home at Greenwich; the later days of his chequered life are quietly passed in its comfortable halls, or within its influence. But where is the retreat for the merchant seaman? His life too is passed in contributing to the honor and renown of his employers. But where shall he retreat to for an asylum like that of Greenwich? And yet he is no less entitled to one, for no less important are his services to his employers, and the good of his country. The defect, however, is not now seen by us for the first time; many good men have at various times and places, exerted themselves in endeavouring to establish Sailors' Homes, but not with that success unhappily which the immense importance of the subject demands. But the object must not be thus defeated; the very nature of our country, its insulated character, the maritime disposition (we may almost say) of its people, and the important station it fills in the affairs of the world all forbid it; and all point to its valuable seamen. There is also inherent in the character of our countrymen that benevolent feeling which only requires to be called forth in promoting an object of so much importance as the establishment of Asylums for our merchant seamen in every principal seaport, of this kingdom, under the names of Sailors' Homes. We say every principal seaport because we all know the ties of family, of early friends, early scenes, and that these must have their attractions in age.

As the commencement of our labours in this field, we shall now proceed to place on record the minutes of a meeting which was held in October or November last at Liverpool. Our readers will find ample matter for contemplation in the sentiments that were delivered on that occasion; and although they may be struck with the oratory that was there displayed, we trust that the great object which called it forth will *not be forgotten, but rather that the truths there so eloquently pointed*

out will contribute, as they are intended, to forward it. We give the proceedings entire as they appeared in one of the Liverpool papers, for which we are indebted to a friendly hand.

Meeting in Support of a Sailors' Home, at Liverpool—1844.

The Mayor, Thos. Sands, Esq., on taking the chair, was greeted with much acclamation, and commenced the business by calling on the Town Clerk to read the advertisements convening the meeting, and, that officer having complied with the request, his worship remarked, that he need hardly assure those present that he had the greatest pleasure in acceding to the request of the provisional committee, for he felt satisfied that if the object contemplated by those gentlemen could be attained, the advantage to that portion of the community, whose interests it was their desire to carry out, would be incalculable. He would not go into details respecting the objects of the meeting, nor of the nature of the establishment about to be erected, because there were gentlemen present prepared to lay before them such statements as would, he was sure, induce the town at large, and that meeting more especially, to co-operate with the Corporation in the promotion of the great end in view. He had the pleasure to say, that he had that morning received a letter from one of their Parliamentary representatives, Sir H. Douglas, highly approving of the objects of the meeting. If the other member, Lord Sandon, had been made aware of the meeting being held, he would, no doubt, have been equally anxious to give his countenance to its purpose, as, indeed, he had already done on more than one occasion, as many of them must be very well aware. He (the mayor) would not detain them any longer from hearing those gentlemen whom he had alluded to, and who, he felt, were much more competent to interest and instruct them than himself, and he should call upon Mr. Adam Hodgson to propose the first resolution.

Mr. Adam Hodgson said that, the resolution with which he had, unexpectedly to himself, and in consequence of the absence of the Rector, been entrusted, was one to which he was quite sure the meeting would readily respond. It related to the social and moral condition of a class of the community whose claims to the sympathy of the public were such as no man there, would, he was assured, dare or wish to deny. If every sea is whitened with our canvas, and if every foreign harbour is crowded with our vessels, if from every clime and every country the full tide flows into our native land, of all that ministers to the luxuries of life, if the productions of our industry contain within them the symbols of our national wealth, we are indebted for these blessings to our seamen—to whose valour and intrepidity it was that we owed that the soil of Britain echoed to no foreign tread; and while other countries have, in consequence of the absence of this arm of defence, been a prey to military licentiousness, and outrage, and rapine, we have been enabled to preserve inviolate our hearths, and our altars from these calamities, and to sit "every man under his own vine and his own fig-tree, none making him afraid." And what was the return we made our defenders? What was the social and moral condition, in this christian country, of that class whose home was indeed "upon the mountain wave," but who knew little or nothing of the cordiality, the sanctity, the holiness of a home on shore. *When they* returned from foreign lands, and strange scenes and climes,

they were made here the objects of pillage and plunder, they were ensnared by harpies, whose study it was to render them their prey. When they received their hard-earned wages there was so much infinity of purpose about them, they had acquired so little of provident, thoughtful, and self-denying habits, that the pecuniary fruits of their services were soon exhausted, and they became hopelessly involved in the meshes spread for their ruin, and in which they became entrapped. Then, they were subjected to temptations to which the peculiar circumstances of their position in a marked degree, expose them, little care being taken to guard them against the consequences of such exposure.

What he had said on this head would, he had no doubt, be forcibly illustrated by those speakers who would follow him, and especially by the gentleman who would second the present resolution—namely, Mr. Rushton, whose experience as a Stipendiary Magistrate in the Police-court, furnished him, week by week, with the most sickening details of the pernicious operation of the evils it was their object to find a remedy for. He would ask the meeting, he would ask himself, how it was that this state of things came to pass? He believed it was because it was not sufficiently known to the public, because of the shipowners, who were anxious for the removal of those grievances, not daring to grapple with them for want of that public support which would enable them to do it effectively; and he hoped before the meeting separated, that they should be promised that co-operation and support they were so well entitled to claim, for it should not be concealed, that the case of the sailors' welfare should not devolve on the shipowners alone. These sailors were our fellow-men, and they were neglected, they were our countrymen, and how little did they participate in those advantages which the improved spirit of the age had provided for almost every other class of society! They were Christians, and how little of Christian sympathy and brotherly love did they enjoy! He was happy to say that something, indeed, had been done in the right direction for their spiritual wants. Twenty-five or thirty years years ago, a floating place of worship had been erected for those belonging to a class of dissenters, followed some time afterwards, by the Mariners' Church, for the community of that more immediately required it. And here, he rejoiced to say, that in these floating temples of religious observance might be seen those weather-beaten sailors, worshipping with an earnestness and devotion in keeping with the manliness and simplicity of their character, and surpassed by no congregation in Liverpool. Here, too, he was reminded of another link in that chain of responsibility which bound them to those men, whose characters had such an influence for good or evil on the characters of foreign lands, and especially among barbarous nations. We boasted of the numbers and the learning of the missionaries we sent abroad to cross the seas, and penetrate through forests, and over arid deserts; and we talked long and loudly of the effect of British commerce on the civilization of the whole globe. He should be the last man to deprecate the importance of the commerce of Great Britain as a means towards effecting the civilization of those lands through which it was disseminated. But he thought that a very narrow view had been formed of the importance of the character of our seamen on the character of the nations with whom we dwelt, and that the elements and the *powers for good resident* in that character had been overlooked. On every

consideration, therefore, of humanity to the sailors themselves, of patriotism, of religion, of utility to the world at large, he thought that no man, whatever was his station or views of public measures, and of the promotion of the welfare of his species, would deny that the object of that meeting was one of paramount importance. He was happy to see that it had received the sanction and the support of the Chief Magistrate; and when he looked around him, and saw so large a number of influential men, of all parties, forgetting every sort of difference that could create a diversity of feeling on this one point, making common grounds of union and cordiality and co-operation for the achievement of one common object, he did confess, that the result he anticipated from that day's meeting exceeded his most sanguine expectations. After a few words more Mr. Hodgson moved the first resolution.

Mr. Rushton in rising to second the resolution, said—May it please you, Mr. Mayor and gentlemen—Some part of the onerous duties with which I am charged have been left unfinished, and my presence here is one of great inconvenience to those who are waiting for me elsewhere. I have only time, therefore, briefly to second the resolution, and most cordially to congratulate you and the merchants of Liverpool, that the day has at length arrived when a class of the community, most essential to you and the nation's salvation, are about to receive the attention which their claims have so long and so clamorously demanded. Mr. Hodgson has just alluded to those painful details of that routine of duty which daily engages my attention, and of which the rights and wrongs of sailors form a large portion. The sailor has few of the endearments of home; and when he arrives in the port of Liverpool, if you see the dock-quays and piers crowded with people, you will find among them boarding-house-keepers and slop-sellers, who form a large portion of those waiting the sailor's landing. The moment he lands he is in their arms. Destitute of ready money, a loan is procured for him from the tailor, on the security of the boarding-house-keeper, to whom his wages are mortgaged for the first advance from this quarter. I am not going to say that all the lodging-houses are of a description demanding our denunciation; but there are others of a totally different description, and in these a vast majority of the sailors abide. He is charged expensively for his food, every temptation that can induce reckless folly is placed within his grasp; and when the time allowed by law for the payment of his wages has expired, and the sailor presents himself at your counting-houses, this same slop-seller and boarding-house-keeper may be seen waiting outside for his hard earnings, which are shared between these two.

This is not all. A further advance is made to the sailor. He is encouraged once more to embark in the same desperate career; and at the expiration of a week or ten days he finds he has no alternative to choose between, but to be turned out naked, literally without his clothes, for these have been retained as a security for the new debt; or he has to ship on board any vessel, going any where, that will bear the exaction of the largest advance; and thus he sails, a mortgaged man, two months of his labour being given to those people before he quits his native shore. The case does not stop here. I most sincerely hope no such thing is going on now; but, the other day, among the details of the Police-court, it was rt of my duty to examine closely into a case of an individual who ac-

complished a fraud, committed on a sailor's relatives by the forgery of his will. The system by which this species of iniquity is effected is in this manner. No sooner does a vessel sail than a person takes a register of the crew; the ship is watched; if a man dies on board, his will is forged; his wages are paid into the Custom-house, and the man with the probate of the false will goes and receives these hard-earned wages, which ought to be taken as assistance to his relatives, or, if he did not leave any, should be appropriated to such institutions as Sailors' Homes.

Now this has been going on for a number of years. In the last generation I remember that these matters were the subject of grave discussion, and earnestly engaged my attention, for I have the honour to be the son of a sailor. The circumstance which then prevented the possibility of sailors congregating in any multitude has, I hope, for ever ceased to exist, and that we shall never again hear of those brave defenders of our country being seized and taken forcible possession of, to fight those battles on which the might, liberty, and safety of England may be said to have depended—battles whose successful issue might be safely left to the spontaneous courage and voluntary zeal of our dauntless mariners. Years rolled away, and a friend, an enthusiastic friend of ours, took the matter to heart. He argued the question, not only on the grounds on which I have put it, but he regarded it as a merchant, thus:—He said, I am sending my ship with a large cargo to a foreign clime, and how do I manage? I send down to a shipping-master, that is, a person who stands as an agent between the master or captain, and the sailor, and who receives a fee on every sailor; I go to him, and he sends for a crew, and the crew come: who they are, or what they are, whether they are able seamen or ordinary seamen, he knows nothing. At length the captain gets to sea with a parcel of men who are unfit to guide the vessel; or if a small portion of them are competent to their duties, entailing such wear and tear, such hardship and anxiety on the officers, that it is most surprising that the voyage is accomplished at all. Now not only will this grand institution you contemplate founding, for I call it grand, as it partakes of the elements of greatness and grandeur; it is one of the triumphs of peace; it is one of those institutions which tell the poor and the needy that the rich and the powerful are sensible of their wants; one of those institutions which spring spontaneously from the hearts and hands of Englishmen; one of those institutions that make one proud that he lives in a free country, and glad that our example in this respect, no less than in things political, may give Europe a knowledge that in order to make a nation brave and free, we must establish institutions to protect those on whom that freedom depends. The institution, I say, which you are about to establish will not only remedy the wrongs I have pointed out, but will save you also vast expense, and you will have the satisfaction of knowing that your charity, as well as your interest, have gone hand in hand. You will no longer have a crew, a motley crew, thrust on board your ships, incompetent to the duties they undertake to perform, or disgraceful in point of character, or plundering you of your property, or for malicious motives, as happened the other day, attempting to burn the vessel, but you will have men, who, from the registry of the Sailors' Home, will have received a certificate of their character both at sea and on shore, and a register also as well of their behaviour, as of their fitness for the office

they undertake. This will be your security: it will, therefore, be your interest to support this institution, if there were no other reasons.

I have little more to say; it is a subject on which a deal might be said, but I have been brought here at the solicitation of the gentlemen of the committee, and at their ardent request I have, as a public officer, laid the result of my experience in that capacity, in connection with the objects of this meeting before you. I cannot, however, conclude, without congratulating Mr. Aiken thus publicly, in the face of his townsmen, on the triumphant result of his untiring efforts in this cause. It is one of which a British merchant may reasonably be greatly proud, and I, for one, offer him my most sincere and heartfelt thanks for the arduous labour through which he is at last about to accomplish it, and the perseverance that led him through all difficulties and obstacles of this great result. Mr. Rushton concluded by seconding the resolution.

Mr. James Aikin, rose and said, Mr. Mayor and gentlemen:—Perhaps there is no person in this kingdom who could better detail the evils and gross frauds committed on the seamen than our worthy stipendiary magistrate, and after the feeling and eloquent speeches made by him and Mr. Hodgson, I am quite sure it will be unnecessary for me to dwell on those evils and frauds that are so conspicuously before us daily in our Police-courts. But this much I may venture to say, notwithstanding all that has fallen from those two gentlemen, that greatly as we must lament the gross frauds and injuries so developed in our courts, they are as nothing compared to the numberless instances of which you never know or learn anything. This evil, therefore, being generally acknowledged, and the desire of bringing about a remedy being also acknowledged, the question then comes, can a remedy be found, and is the one we are about to propound the one likely to carry out the object in view? Now I am sorry to find, among a great number of gentlemen, that we are stopped *in limine* upon this question. We are told it is a hopeless task, that it is impossible to do anything to redeem the character of the sailor, or to improve his condition. Now it will be necessary to clear the ground-work before we raise our superstructure, for if it be a hopeless task, our labour will be in vain. But gentlemen, I must first learn, I must be first taught, and led to believe that the sailor is of a different nature to ourselves, that his is totally different to that of all other men. I must be led to believe that he is not alive to the same feelings and desires of other men. But, gentlemen, instead of believing in any such thing, I am quite sure it will be acknowledged that if there is one class of men, who, from the generosity of their nature, are more likely to be instrumental for good or for evil, it is the class in whose behalf we have met. We are often met with the cry—"Oh yes, you are very good, well intentioned, philanthropic people, but there is too much enthusiasm, and it will end in nothing." Now one word in reply, and it is this,—that similar institutions have been established elsewhere, and are at this moment in active working.

So much, then, for the twitting we have met with from those who think the plan a hopeless one. Then when it is acknowledged that something may be done, the first portion of my resolution asserts that the responsibility attaches to all of us to endeavour to do that something. *Sir, we have* heard much of late of "property having its duties as well

complished a fraud, committed on a sailor's relatives by the forgery of his will. The system by which this species of iniquity is effected is in this manner. No sooner does a vessel sail than a person takes a register of the crew; the ship is watched; if a man dies on board, his will is forged; his wages are paid into the Custom-house, and the man with the probate of the false will goes and receives these hard-earned wages, which ought to be taken as assistance to his relatives, or, if he did not leave any, should be appropriated to such institutions as Sailors' Homes.

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the matter to a successful issue. He concluded by saying that he was not entitled to all the merits attributed to him by Mr. Rushton, for that Mr. Tomlinson, the secretary, and other gentlemen, had been indefatigable in their exertions in the good cause.

Mr. W. Potter seconded the resolution proposed by Mr. Aikin, in a brief but excellent speech, in the course of which he alluded to a contemplated alteration in the mode of managing the Merchant Seamen's Fund, which he considered would be of a detrimental nature, so far as Liverpool was concerned.

The Rev. Hugh M'Neile, on rising said,—Sir, at an early date in your official year, as our chief magistrate, I had the privilege of addressing you on the subject before us at a large public meeting, including a very considerable number of the seamen in this port at that time. It was with no ordinary degree of satisfaction, that, within a month after that meeting, I received a copy of a printed circular emanating from several gentlemen who had frequently consulted together on this deeply important subject, who had held a meeting, and who had at last concluded upon the fundamental principles which should guide them in the establishment of a Sailors' Home; and they appointed a provisional committee to frame laws and rules for its government, to solicit donations, and to adopt such other measures as might tend to promote the proposed institution, and obtain the liberal support of the public. To the gentlemen composing that provisional committee, and others who have since joined them—and here I believe I would be quite correct, notwithstanding the modest deprecation of such a thing by a late speaker, in joining with Mr. Rushton, and specifying Mr. Aikin as eminently entitled to the thanks of all the best friends of this good cause, to that Provisional Committee certainly such thanks are due. Their praiseworthy and persevering efforts have now been seconded by the substantial liberality of the Town Council, a suitable site for the proposed building has been granted, and we are again convened before the public with the Chairman of the Council as our Chairman. We have all heard this morning from a gentleman, whose professional and public position qualifies him to speak with distressing accuracy upon the subject, such an account, brief but pointed, of the various frauds, and exactions, and temptations to which the sailors in this port are exposed, as to leave no doubt of the urgent demand for some well-directed efforts of enlightened benevolence and Christian sympathy, to abate, at least, this intolerable nuisance.

We have, then, in passing the resolution which has just been proposed to you, recognised the responsibility which devolves upon the merchants, ship-owners, and inhabitants in general of this town, to aim at a remedy for the evil by the establishment of a Home Savings' Bank, and Registry. The particulars of the plan form the next feature in this day's business. These are embodied in the third resolution, which I have been invited to submit. With your permission I will read the particulars proposed. The rev. gentleman here read a long list of particulars, from which it appeared that the first and immediate objects of the Institution would be to provide for seamen board, lodging, and medical attendance, at a moderate charge. He then continued as follows:—*It will not* be expected—it would, indeed, not be tolerated, and I am

happy to think it is not at all necessary that I should enlarge upon all these points. I will confine myself to some general observations on particular and important points. We are, of course, unwilling to excite any needless hostility in any class, and, therefore, I think it desirable, in the first instance, to call attention to the matter of board and lodging, which form a specific part of our plan. However capacious the intended plan may be, and I hope to see it contain several hundreds, yet still the number of seamen who can be received as inmates, compared with the number frequenting the port, must, at the largest, be a very small proportion; and we have no wish to withdraw from respectable and properly-kept lodging-houses those seamen who have already made acquaintance with such. It is no part of the plan that the advantages to be derived from the savings' bank and register of character should be confined to the inmates of the house. This will be open to all; and, therefore, I think, sir, we have good reason to expect that really-respectable lodging-house-keepers—men who wish to combine the true benefit of the seaman with their own fair and legitimate profits—will hail us as allies, and co-operate with us, instead of harbouring suspicions, and endeavouring to thwart our benevolent designs. It will be their interest so to do.

There is, indeed, a class from whom we must calculate upon hostility, because, sir, in point of fact, it is impossible to take any efficient step towards the improvement of the character or condition of the seamen without placing ourselves in direct antagonism to the evil and mischief of the men I allude to. I allude to those designing men, aided by abandoned women, who lie in wait to ensnare the returning seaman, to entice him by the cravings of his animal passions to plunge into the paroxysms of licentiousness and the brutalities of drunkenness, until he is either robbed of his wages, or induced to spend them in a manner akin to robbery; and when he is fleeced, and his clothes and watch have found their way to the pawnbroker for the satisfaction of the lodging-house-keeper, then to cast him out upon the streets to the tender mercies of some shipping-master, who exacts on the mortgage of Jack's next voyage before he will pass him to a shipper and get him once more afloat. I said abandoned women; and when I used that word, I meant the expression as descriptive rather of their deplorable condition than reproachful of their character. Poor, unhappy creatures! they too have been rifled of a treasure more precious than gold or silver, and then abandoned by their heartless, mean, detestable seducers. Sir, it is the seducer, especially the gentleman, falsely so called, he who can and does pay high for his loathsome indulgence, and then turns away in neglect and distrust from his helpless victim; he it is who is the manufacturer of harlots; he it is who degrades to the condition of a harpy in our streets, the creatures who, but for him, might have been an ornament and blessing to society as the head of a respectable family; he it is who thus prepares pit-falls, "deep ditches," say the Scriptures, worse than rocks and reefs, for the shipwreck of our mariners. Yes! and when the gallant tar, who has successfully braved the dangers of the deep, the toils of protracted storms, and the vicissitudes of Antipodean climes, has returned, he exhibits in his history a melancholy illustration of one of the most instructive passages of ancient history. Hannibal, with his sable host, were safe in all the ruggedness of their Alpine passage. Hardships

were wholesome to them. Precipices to be plunged down, mountains to be scaled, ravines to be crossed, these cultivated their energies and nerved them for victory. But Capua was their ruin; the soft syren lap of sensual indulgence relaxed their discipline, and made them an easy prey to their watching, calculating foes.

Sir, we do indeed desire earnestly to protect our seamen from imposition and extortion, and to encourage them to husband their hard-earned wages; and in order that they may have within themselves the elements of such protection, we desire to promote their moral, intellectual, and professional improvement, and afford them an opportunity of receiving religious instruction. For their intellectual improvement it is proposed that a library and reading-room should be established, and that both of these be made as attractive to them as it is possible to do. For their moral improvement it is proposed that there should be a savings' bank and registry of character; and for their religious improvement it is proposed there should be a clergyman and visiting chaplain to the institution. These are fruitful topics; but I must be brief. We have lately had opportunity, more or less, of witnessing the gratifying, and almost miraculous effects produced by savings' banks. I fully agree in the observations made by Mr. Aiken on this point. Get a labouring man, whether seaman or landsman, to make use of a savings' bank, and you have a hold of that man. He becomes a member of society. He becomes interested in the common welfare. He has something to keep, and, what is still more elevating to his character, he has something to give away. And this is not chimerical.

I hold in my hand the last report of the institution in London, similar to that we now desire to establish here. And, I learn one most gratifying instance recorded in this report :—"It is a circumstance most gratifying to the directors to be enabled again to state that of the £20,000 of sailors' money which passed through our hands, £4,800 was money sent by the officers of the institution, to sailors at their own homes, or to their relations in various parts of the country." Here is the prospect which Mr. Aiken presented in theory realised in practice. I do hope that the savings' bank part of the plan will be most diligently and skilfully carried out. Then as moral improvement advances, a register of character carefully kept will give the seaman the animating encouragement that his moral character is not lost sight of, and will secure his reward, by securing more readily advantageous engagements as he goes on and knowing, Sir, that all such engagements must speedily terminate, and recollecting that the seaman, after all, has an eternity to spend, it is an integral and important part of our plan to give him the opportunity at least to learn the redeeming love of "Him who died and rose again for us men and for our salvation,"—that so, our sea-faring brother may, by the grace of God, working in due season, find a return of that grateful, practical love, for that pardoning love which he has mercifully experienced, and thus find, within his own bosom, the germ of eternal love in conformity to the character of God, for "God is love." These are the chief features of the plan. The other details of the resolution are so manifestly matters of routine business, that I am unwilling to delay the meeting with them; but surely such an object as that now laid before *the meeting*, and from this meeting to be laid before the public, must and *will meet the* deserved and required support. I know not how many

thousand pounds may be required to complete the building, and lead to the effectual launch of our project. I heard some one say seven, another nine, and now I hear ten thousand pounds. Well, sir, the evils which loudly cry for a remedy being exposed, the duty of aiming at a remedy in this direction being recognised, the principle of the plan being approved, I surely can entertain no doubt that the adequate funds will be supplied.

Is it to be too sanguine to hope that ten gentlemen, merchants of this town, who have prospered into princes, so far as wealth is concerned, will now, by God's help, determine to carry this matter through, each giving his own £100, at least, at first, and each undertaking to find five of his wealthy friends who will join him, and do likewise! This would yield £5,000, which, together with the money already announced as bestowed, would leave but a small balance; and, permit me to say, that the merchants and shipowners ought to leave a very small balance for their less wealthy neighbours to supply. Urgent appeals on this point might be derived from various sources. Simply on commercial grounds the matter might be urged. You have heard this already. The improved character of the seamen, the improved intelligence of the most subordinate members of the crew, and the consequent increased safety of the vessel in the case of accident or illness to the master and mate; these, and kindred consequences ought to speak with a loud voice to owners and underwriters, and insurance companies. On Christian principles the matter may be urged. This, also, has been alluded to; and surely, sir, it ought to be an object with British Christians that the men who carry throughout the world the matchless specimens of England's handicraft in manufactures ought themselves to be specimens of the Christianity of England, instead of being, as too many of our neglected seamen, alas, now are, profane, dissolute, and drunken stumbling-blocks in the way of the heathen where they visit. And the decks and wooden walls of Old England, her best defence in the day of danger, manned by her indomitable tars, who never struck her flag; these might be pleaded, these might also be stirringly addressed, and especially at this moment, when this feeling has been made to thrill through the nation. For it was only on Monday last, the anniversary of the battle of Trafalgar, the Victory was decorated as usual, that our Sovereign, Queen Victoria, whom God preserve! went on board that vessel. She ascended the quarter-deck, came where it is inscribed, "Here Nelson fell." She paused, read the inscription thoughtfully, and then she plucked a leaf of the wreath of laurel that encircled the spot and clasped it to her royal—her right-English heart. And her attention was called to the Admiral's signal on that remarkable day, when she read, with a full, emphatic voice—"England expects every man to do his duty." Here, sir, a thousand recollections and associations start to the mind, all well calculated to give our seamen their proper place in our consideration, and every plan for their welfare, and to furnish claims on our substantial gratitude. For though our seamen are not now called to the discharge of such dreadful duties, and, we trust, in the over-ruling Providence of the Most High, for a continuance of peace, yet, deeds of days gone by, deeds, productive of peace, because decisive in war, ought not to be forgotten; and if it was the sailor's duty then to fight, to do his part to preserve to our use the happy homes of Old Eng-

land, it is equally the duty of every Briton in our day to supply a home for Britain's seamen.

But, sir, I urge a softer theme. I observe in one of the resolutions an allusion to the children, especially the orphan children, of our seamen; and, when I read this, my attention reverted from it, naturally enough, to the parents of our seamen. I consider the multitude of youths that I see amongst the seamen in the town, and I picture to myself the anxious fathers and affectionate mothers of those young men following them with their prayers and tears to your port. Sir, the poor have tender feelings as well as pressing wants. It betrays a grievous ignorance of them to assert that their natural affections are less tender than our own. Who amongst us that is not a parent, I believe I ought to say, who, that is not a mother, can adequately enter into the feelings of a mother for her sailor boy? She dreads the sea, 'tis true; but she dreads the shore still more. She fancies her dear child taking his turn of duty on deck or in the rigging, and then turning into his hammock, and, through all this, her heart can linger with him, and she can surround him with the shelter of her prayers. But when he comes on shore, and she attempts to trace his steps, alas! her heart sinks at the too probable aspect, her prayer falters, and she would fain dismiss, if possible, the thought of him altogether, than endure the revolting association. Oh! behold then, sir, what boon you confer on such a mother by the establishment of a Sailors' Home! There, her heart may linger about her darling child! there, she may imagine him still returning to his bed of soberness and chastity! there, she may linger with her supplications to the God of all mercy for a blessing upon her son, and a blessing upon his friends and benefactors, who supplied him with such a refuge! Oh! sir, this one feeling alone, and with this I must, for the present, at least, conclude, this one feeling should more than recompense for every Christian effort, and every Christian sacrifice that we can make on this behalf. For, sir, if there be on earth a spot of Paradise unstained by the fall of Adam, a lovely, lingering trace of God's own image upon our nature! if there be a shrine into which selfishness has never entered, but where disinterested affections sits enthroned! if there be a string unrelaxed by the damp vapours of our fallen atmosphere, and still vibrating true to the harmony of Heaven, it is in the tender, patient, enduring, unconquerable love of a mother's heart to an absent, endangered son.

The Rev. George Brown was next introduced by the Mayor, and in the course of his speech observed that the object which they had in view was so disinterested in its nature, and so philanthropic in its consequences, that instead of congratulating themselves that they had that day arrived at the formation of that great and godlike institution, shame and regret should rather be felt, when it was recollected that it was so far back as the year '41 that a prospectus for the formation of a Sailors' Home was issued; nay, when they considered that from 1630, when Liverpool could boast of fifteen ships only, and none of them more than of 35 tons burthen, down to the present year of 1844, when she enumerates her ships by hundreds, and their tonnage by hundreds of thousands, nothing had been done to preserve the mariner, not from wreck as he enters the mouth of our busy river, but to protect him when, having safely weathered the surges

of the deep and, arrived in harbour, he is encompassed by the shoals of temptation and whirlpools of vice which threaten to submerge him; it was then he was in danger of being wrecked, stranded, dismasted, broken up, and disqualified for the voyage of life, and, more than all, unsuited for eternity. It was to prevent such perils as these they were that day called upon.

With this view, it was proposed to establish a Sailors' Home, and by this it was assumed that the seamen up to the present time had been without a home. It might indeed be true, as a former speaker had observed, their home was on "the watery wave," their "march was on the deep." But was it to be wondered at that the sailor, as he was tossed to and fro, helpless as the sea-weed, or the foam upon which he rode, should feel no domestic endearments? The very ship was a stranger to him, and of his crew he might be as ignorant as the waves. He had no local habitation, no domestic assurance; for him there was no green spot in the valley or on the hill side; he was a man without a home, and being so, was it to be wondered at that he should be, as was too often the case a man without a conscience? It was to supply this great blank and void in the affections of thousands of their fellow-countrymen they had then assembled.

They did not profess to supply them with all the endearments of home, but they wished to proclaim within hearing of the crew of every vessel which furled its sails before our waters, that there was no need to wander as exiles, a prey to all the profligates and wantons who contaminate the very streets on which they tread; there was a home for them, clean, respectable and decent, within the walls of which their morals would be improved, and their property protected from pillage; in the servants of which establishment they would find friends, in the benefactors to which they would find patrons. Here, were they in sickness, was provided the best attention and advice, and most of all, if they had been brought to the conviction that life at large was but a voyage, soon to be terminated either in misery or in bliss, here was a man of God, who would pour out knowledge for their instruction, and whose bosom swelled with prayers for their salvation. The reverend gentleman, at some length, pressed the peculiar claims the seafaring population had upon the generosity of the inhabitants of Liverpool in particular, the prosperity and increase of the port depending upon them. Was it not reasonable that they should have some claim upon them for a portion of that wealth which they had been instrumental in realising? It should never be forgotten that in distant climes our seamen were the representatives of our country, how imperative then that they should go forth, not as ignorant savages, not as monsters of irreligion and impiety, but as moral, well-principled, industrious men, and as Christians. Their great and glorious objects would be best achieved by the adoption of the resolution.

The Mayor said he was sorry to say that he had received an intimation from the Rev. Rector Brooks that he was unable to attend the meeting, however he had great pleasure in introducing the Rev. Rector Campbell.

The Rev. Augustus Campbell said it was merely by a glance at the advertisement calling the meeting, that he had become acquainted that such meeting was to be held; still he thought it his duty to attend, be-

cause the subject was one in which, as a clergyman and rector he could not fail to take a deep interest and concern. He had much pleasure in addressing a few observations, as the meeting was one in which he could not discover any elements of political or religious controversy. He could bear one testimony to those mentioned by the stipendiary magistrate, of the various frauds committed upon sailors, and if anything could be done to prevent a repetition, a great and permanent good would be done. As one of the directors of the Savings' Bank, he had had the opportunity of knowing that sailors do sometimes deposit, but then it was, generally speaking, only those who had the happiness of having wives.

Mr. Aikin said before the resolution was put, he would wish to make an observation in reference to the Rev. Rector not having received an invitation. Each member of the committee had had certain names assigned to him, and one gentleman had undertaken to invite both rectors.

The Rev. Rector Campbell said he had merely mentioned the fact to explain that he was unacquainted with the details of the objects of the meeting, as an apology for not entering more largely into them.

George Grant, Esq., having been introduced by the Mayor, rose to propose the appointment of a committee. He said, from his connection with the shipping interest, he had had opportunities of becoming acquainted with the character and habits of sailors, and of the iniquitous system of which they had so long been the victims, and he hoped the projected institution, under Providence, would be the means of rescuing the seafaring population from the thousand snares by which they were beset, and of elevating them in the scale of human beings; and thus, whilst they send them out more trustworthy in their vocation, they should confer upon them permanent blessings, which, under God, might lead to eternal happiness.

William Rathbone, Esq. rose to second the resolution. He said he had been much gratified with Mr. Grant's remarks, but he thought the most important part of the plan had not been touched upon, and that was in reference to the amusements. It might in truth be said, that the sailor led a very vagabond life, and they would have to deal with the materials as they found them. It had been said, "Give me the making of the ballads of a country, and I care not who makes laws," therefore they ought, in an especial degree, to look that innocent recreations and pleasures should be obtained at such an institution. This principle was now recognized in every institution, having for its object the elevation and instruction of mankind. It had been adopted in the Mechanic's and Collegiate Institutions, and in Manchester, with the happiest results. If they adopted a system of intellectual amusements, it would be a great inducement for sailors to frequent the Home, and Jack was a proud fellow, and would not go without a good coat. It was well known that our places of worship were not over well attended,—get the poor to respect themselves, and a good coat on their backs, and the chances were, that they would be where they ought to be,—in their places of worship, whatever those might be. He hoped the committee would pay attention to these sements, and as there were songs of a nature to be admissible, these introduced. The sailor was by nature a religious man, by seeking of the Almighty's power on the great deep, by becom-

ing acquainted how helpless he was before the winds and waves, and it was by means of intellectual amusements they must impart to him the instruction which was necessary for him to acquire.

Mr. Cotesworth said he had been for forty years amongst sailors, and, of course, had seen much of the good and evil of their characters, and if the object of the meeting was to investigate and correct the evil, they must, in the first place, endeavour to withdraw them from the temptations to which they were exposed, and he thought the best means to do so, would be those contemplated to be adopted. They needed but small pecuniary aid, and a ship of some 300 tons burthen for the illustration of nautical affairs, and surely they would not refuse to give it for the use of a body of men who protected all their ships.

T. B. Horsfall, Esq., proposed a resolution awarding thanks to the Corporation for a grant of land, and offered to the meeting some pleasing and pertinent observations.

Duncan Gibb, Esq., said he should be happy to become a member of the committee, to carry out to a successful issue the objects of the meeting, and he hoped they would be assisted, heart and hand, by his brother merchants and shipowners. He moved a vote of thanks to the provisional committee.

Joseph Ewart, Esq., after some appropriate remarks, seconded the resolution.

William Brown, Esq. next addressed the meeting, and urged upon the clergy that it was their duty, by their example and precept, to endeavour to forward the establishment of a Sailors' Home. He concluded by moving a vote of thanks to the Mayor.

The Mayor acknowledged the compliment, and stated the great pleasure it had given him to preside.

Before the meeting terminated, the Mayor said he had received a note from Mr. Tinne, expressing that gentleman's inability to attend, but he had sent a cheque for £100 as his representative.

The New Merchant Seamen's Act.

"*Laudatur ab his, culpatur ab illis.*"

This old adage will, I take it, bear upon the New Merchant Seamen's Act, as well as most other matters, political or otherwise, and I feel emboldened to forward you the following observations thereon, in consequence of the honor conferred on me by you, in deeming my late "Treatise on the Merchant Service," (written for the *Nautical Magazine*,) worthy a separate publication. In what I am about to say respecting the New Merchant Seamen's Act and contingent evils, likely to accrue from it, I hope all who may honor me by reading the following remarks, will acquit me of writing, simply for the sake of abusing a legislative enactment; whereas my only motive, will be to place before the nautical world, the strong necessity there is daily increasing for a total reform in our merchant marine; and my opinion that the late new act, is in a great measure impotent to that effect.

It is as well to observe here, with respect to the various speeches of

Messrs. Sands, Hodgson, Rushton, Aikin, Potter, Rev. H. McNeile, &c., at the public meeting held at the Sessions House of Liverpool late in last year,—*Firstly*, That until you honored me by placing the abstract of the newspaper in my possession, I was, (from being in China at the time,) totally ignorant of the fact of such a meeting having been held.—*Secondly*, Those speeches, their origin, intent, and purpose, are all *too* good to allow of any comment on my part, save one; and that is, I would I could go into the high ways and bye ways, and cry out with an exceeding loud voice, to our legislators, merchants, shipowners, &c., "Go thou and do likewise," and that not by twos or threes, but *one* and *all*, and *together*.

And now I shall proceed to analyze the various component parts of the New Merchant Seamen's Act, principally, I freely confess, to prove how very far it falls short of, even its REAL purpose, viz., that of finding out how many men can actually be found, as *able* seamen, in case of a strong necessity for their aid in any approaching war, and secondly, how very futile it is, as to all executive amendment of the very many grievances existing in our mercantile marine.

Imprimis.—This act says, "Definition (what an abuse of words,) of terms employed! That *every person* (apprentices excepted) who shall be employed or engaged to serve in *any* capacity on board a ship, shall be deemed to be a *seaman!!*" Here is a commencement,—why at this rate, Jemmy Ducks, the cook's mate; Cuffy the nigger, as cuddy servant; and Mrs. Pipes, the boatswain's wife, who ship's as wet nurse to the lady-passenger's child, are as good sailors as he of the hard hand, practised eye, and skilful bearing in the shape of able seaman, who alone can ship under true colours, according to the tenor of this act. And, as regards the returns of British *Seamen* gained by this means, they must ever be a garbled extract of waisters, waistrils, extraordinarily ordinary seamen, and the real sailor combined; not only defeating the most useful intent of this act, in trying to arrive at the real number of good serviceable men afloat, but putting the axe of humiliation to the very core of Jack's honest and proper pride, who feels deeply the mortification of being (a bee) classed with drones. But what has Jack to do with sensibilities, good, bad, or indifferent,—of course none; any more than one of Messrs. Wigram and Green's ships would feel, at meeting a punt below the Nore, which said punt, if on the starboard tack, and capable of articulation, could safely say, according to law,—"I'm a ship as well as you, so up helm and keep away from me, will you." Simplicity of classification is a beautiful feature in all laws, and certainly this part of the new act can at least lay claim to the exclusive right of the word, simple.

Now, Sir, I am fully aware how much easier it is to find fault with, than remedy existing evils of any kind, but at the same time I do say it is deeply to be lamented that in the formation of this new act, some more efficient mode of inducing Jack to come forward (*con amoré*) was not introduced. It is, I believe, generally admitted that it is becoming daily a more difficult task to find men for our ships of war, especially those of the right sort; and this obstacle will become insurmountable in case of war, unless recourse is had to the old system of pressing, (now out of all question,) or that of offering seriously large and expensive premiums to *our best* seamen as volunteers. But in the first place, as the definition

of terms now stands good in the new act, how any proper knowledge of the good and able man, from the useless and bad man is to be effectually arrived at I am not aware.*

Had some tangible benefit been held out to Jack, which, by a short service in our navy, or exemplary conduct in our Merchant Service, he might have reasonably hoped to grasp,—in short, had the new act set forth somewhat in manner following,—"that Her Majesty's Government seeing the necessity of a redress in our mercantile marine, of the various grievances now pressing on the moral habits and social comforts of the foremast man, as also the propriety of coming at a specific knowledge of the number of able seamen navigating the ocean in British bottoms, hereby enacts, that from the date of the 1st January, 1845, all men, having a calling or employment on board ship, shall appear &c., &c., on or before such a date, bringing with them a certificate of birth-place, signed by their respective parish authorities, their articles of indenture, as apprentices, endorsed by the master, and all certificates of character received from their various commanders, to the end, that such able seamen who fully comply with the clauses of this act for the space of—— years, shall be entitled to the following rewards, viz.:——." Good heavens, what a field of *moral* improvement would this open to the really able seaman. Instead of now saying,—"d—n the register tickets, and all who invented them, for the purpose of catching me, when fleets want men," would he not be more ready to appear with a will, and in his true colours, if he had the hope held out to him, that by good conduct and a ready compliance with the law, his widow would be clothed, and his fatherless children educated and fed; or if Providence spared his life through all the vicissitudes of his perilous calling for a certain number of years, that when hard work and constant change of climate had borne down his physical powers, his moral and mental worth would stand good, as a substitute in the eyes of his government and country, in the shape of some shelter for his weather-beaten head. Then indeed, when Jack is taught to believe himself of some more value, morally, than a cab horse, he will begin to have some respect for himself, and to hope that in the lottery of social responsibility he has the same chance of drawing a prize as his neighbours of *terra firma*. But government would very probably reply to all this,—"It's all very well for you, Mr. Keane, and all such schemers, to lay down plans of hopeless philanthropy and useless

* It will perhaps be urged that there are compulsatory means taken, by which every master of a ship is obliged, under severe penalties for non-compliance, to forward to the proper authorities a return, printed according to law, of each person on board his ship as part of her crew, before leaving, and on returning to port. But on a very patient research into the various schedules bearing upon this point, although I find required by law his name in full, age, birth-place, quality, place of death, and how his body was disposed of, government have not deemed it of sufficient consequence to make one effort to ascertain any moral or immoral attribute belonging to a class of Her Majesty's subjects, as numerous as they are valuable, and valuable only in proportion to their worth, as decent members of society. No! Bill Smith, seaman, 27 years, Ratcliff Highway, drunken, disorderly, and mutinous blackguard although he may be, will pass muster in the crew list, to be returned according to the new act, with the same impunity as Thomas Jones,—steady, able, sober, and willing however he may be.

expenditure to us, who really have not a fraction without its pressing and immediate claimant; we have made laws, by which the properties of society are guarded; seamen are a class of men whose habits are irreclaimably bad, but then our laws fine them five shillings for being drunk or disorderly."

To be sure we are bound to confess, we allow of, and feel content to receive revenue from loathsome sinks of iniquity and debauchery, yclep'd gin shops, in which, aye, even at sun-rise, are to be seen the sailor, his wife, and perchance his daughter, together with thousands of our labouring classes, gulping down perdition alike to soul and body, and trying how best to curse those taxes, the means of paying which is rotting their very heart strings, in the shape of gin, gin, gin. It is also true that we are fully aware of the existence of brothels, where foul disease, decked in the semblance of voluptuous health, is allowed to seduce poor Jack at every turn, to the utter perdition of all his physical powers and moral principles. But no tax is levied on the common prostitute, who, in London, the first city of the first and *most moral* nation in the world, is allowed to walk the public thoroughfares, to the ruin of one part of the community and the disgust of the other. As Sterne says,—"We manage these things better in France." There it is indeed admitted they must exist, but government puts a tax on whoredom: there they have register tickets, not only for Jack, but his paramour, and the last is placed under a discipline as dangerous to break as that of a man-of-war, her conduct made to be tolerable, her state of health rigidly examined, her abode set apart from her better fellow beings, and in fact, the garment of decency drawn quietly over that part of the human system, fallen into decay and moral disease, too offensive to be nakedly exposed.

But what has all this to do with register-tickets, New Merchant Seaman's Act, &c.? three-fourths of my readers will say; stick to the point, and don't fly off in this way. I answer that *I am* sticking to the point, and the *main* point too. I have been spared to wander over the face of the globe for the last thirty years, and has it not given me pain the most humiliating, to see our sailors the most riotous and debauched set of men (when in port,) on the face of the earth; and this state of things is not confined to our mercantile marine alone, for no longer ago than last year, I was in a port in the China Sea, where the respective crews of a British sloop-of-war and an American frigate had liberty on shore. It is, I am pained to say, too strictly true, that I had, in company with three American officers, to *walk over* the senseless bodies of sundry British seamen lying dead drunk in the streets; and meeting others at every turn, presenting features disfigured by black eyes and contusions of all kinds, so as inevitably to present at the first muster to divisions on board, a most disgusting evidence, that severe discipline strictly enforced, can alone tend to keep the British seaman within the pale of common decency. But what a contrast did the crew of that American frigate present! shame forbids me to make the comparison, so much to the discredit of our own seamen, as a man, responsible to society for at least a remote attention to its laws.

But this evil does not end here. First of all call to mind the state of primitive simplicity and singleness of mind pervading all classes of people in the islands of Otaheite and Owyhee, and many others, when first our

exploring ships found them out as the simple handiwork of the Almighty; and now, what has civilization done for them? It has given them missionaries, of whom, as a body, I have seen too many defaulters to name them as a blessing to the heathen, perpetually mixing themselves as they do in secular matters, for the filthy lucre of gain, and sending home rhapsodical accounts of the conversion of so many savages, three-fourths of whom are bribed with an old blanket or tenpenny nail to repeat the Lord's prayer, precisely as a parrot is taught to say, "Poor Poll." Yet tens of thousands of pounds sterling, I might say millions, have been lavished on the dissemination of the Christian religion amongst those who are guilty only of the sin, (if with them it *be* a sin,) of ignorance towards God; whereas, at the foot of our very altars at home, little or no sterling efforts are enforced to lead our besotted and ignorant seamen to any better use of, or value for God's holy word than its obscene abuse and blasphemy; the result of all which is, that at both of the above-named islands, and many others, the British seaman, with his accompanying vices, have planted the grog shop and brothel, sown sin, cupidity and foul disease, where formerly grew the palm tree and the bread fruit, and where stood the hut of the untaught savage, noble in his simplicity of mind, and happy in his ignorance of the world. If any one doubt this assertion, let him refer himself to any captain of a South Sea whaler, or do himself the honor of enquiring of Mr. Enderby, of Greenwich, the truth of this statement; a gentleman who has been at more expense, and made more sterling efforts at producing order and decency amongst the crews of his various whalers, (which have ever been employed in the search of science as well as fish,) than the world at large will ever give him due credit for, simply because he loves to do good without display.

And whilst I am on the subject of South Seamen, let me ask, if a register ticket, lawfully armed *cap-a-pie* in London, will, (for fear of being guilty of a misdemeanor,) be binding on the British seaman, when to the southward of all law, save that of the strong arm? No! until some *moral* hold be taken on Jack's better nature, the lawless ruffian will shew himself, when no immediate dread of punishment is before his eyes. The very life of the captain of a South-Seaman is often in imminent danger, and his difficulty in either retaining, or keeping in order his crew incalculable, as evidenced in a thousand instances, of which the following is one.

A captain of a whaler, his chief and second mate, having detected the concealment of a great quantity of spirits on board, in possession of the crew, shortly after leaving some port of refreshment in the South Seas, quietly took possession of it themselves, and carried it into the cabin, for the very proper purpose of keeping order and sobriety on board. Well, I think it was the second mate, who had the first, or middle watch on deck, (I'm not sure which, from memory alone,) the crew seized him, went down into the cabin, seized the captain and chief officer, and then, —what next? *seized them all up and flogged them*, took back their liquor, and set them at liberty again, with a severe caution to *conduct themselves better for the future.* This was putting the Scriptures in force with a vengeance, the first last and the last first. Well, the next day, I think it was, or shortly after, the look-out man saw a number of whales afar off, on the *quarter*, so as make it necessary to give orders

for altering the course ten points to near them. What was to be done; the captain was quietly stealing to some place where he could say his soul was his own, but, *had he not gone* after those fish, the crew afterwards said, both he and the two mates should have walked the plank. Luckily for him, he had the bump of discretion very prominent, and *did* steer for them, caught, cut up, and got on board as many as made him a full ship; a compromise being made with the crew, that, if they conducted themselves well during the remainder of the voyage, the *unusually* painful operation of flogging captain and officers should be borne in silence as regards the law.

Now, supposing this to have happened *this* year, with register-tickets as they now stand, in full force, will any one be hardy enough to say, that fear of any contingent consequences from them, would have prevented that crew from committing murder, had their captain persisted in steering for a port of protection. No, no, it is a sad pity that all this endured whilst perfectly awful sums of money have been, and are still expended, (I had well nigh said wasted), in trying to find a north-west passage, for the mere sake of the most chimerical scientific research, ending as yet in nothing better than our being taught that very useful lesson, "Thus far shalt thou go and no further," and eliciting from a very respectable and well educated friend of mine, the following observation, in reference to our wet summers and prolonged winters; viz., "That Captain Ross had ascertained that the north pole was much nearer England than it had been previously supposed," which fully accounted for our change of climate. Now, whilst ships were thus sent to the *north* on the most speculative philosophy, why was it, may I ask, that in the *south* seas, no proper or efficient naval force, was formerly sent out to protect, not our fisheries, but our national respectability, to see that captains are not insulted, struck, and sometimes murdered, in the discharge of their duties to their owners, and their arduous efforts for the good of all on board, in their dangerous calling? and, why is it, that such men-of-war, so sent out, would, according to law, be allowed, if short of men, to receive volunteers from each whaler, which had a discontented crew, to the utter ruin of the best prospects of the voyage; for when short of hands, a whaler is most decidedly helpless?

On this last subject I shall treat at some length on coming up with it in the new act, and detail its most injurious consequences on our mercantile marine, its discredit to Her Majesty's service, and its utter want of justice, as well as its decided tendency to produce insubordination in the merchant seaman, who, as the law now is, has only to make his wish to serve Her Majesty known, through the medium of a tarry pair of breeks run up to the fore-top-gallant-mast-head, to be received on board our men-of-war with open arms, with all his sins unasked and unheard.

Now, what I wish to contend for, as respects the register-tickets, and the accompanying definition of terms employed, is—That they are both *morally* defective; that calling every horse-marine a sailor, who may chance to be employed on board ship, will never, either effect a clear knowledge of our intrinsic marine force, or tend to induce the able seaman to comply with the provisions of the new act, as respects his register ticket, except as a matter of sheer necessity. I have the register ticket *now open* before me: it requires *a* name, and place of birth, but nothing

is so easy as to give a false one, or both, without the extra proviso of a parochial certificate, signed by the proper authorities; hair, eyes, height, complexion, &c. are all very well; capacity: how is this to be fairly come at, by the present style of register ticket? not at all. But *had all masters of merchant vessels been compelled by law* to give, at the end of each voyage, a detailed account of the man's professional and moral worth; headed on the back of the register ticket, as introduced by me in my late treatise on the Merchant Service,* thus:——— and at the end of it, or under it, had been certified, that all able seamen complying with the letter of this act, and conducting themselves well for a certain time, should be entitled to a certain reward; however small, this would go farther towards direct evidence of our effective strength in seamen, and their moral improvement, than all the threats of fines and punishment stuck on the back of the present ticket, tending only to make Jack do wrong, for fear of doing right. Altogether, the present ticket, as it now stands, puts me in mind of the practice of many gamekeepers, who having a strong-working and wide-ranging setter to shoot over, when the poor beast gets out of proper range, they first call him back with a most stentorian voice thus—"Don, come in here, will you, and be d——d to you!" and then, when he does come, doing precisely what he is told to do, he is well flogged for obeying orders.

In the strong continental struggle now so long passed, we taught the whole of Europe the art of war, until Jack is now pretty nearly as good as his master. Money was no object in effecting this; money was no object in emancipating the negroes of our West Indian Islands; money was no object in attempting to put down the purchase of slaves on the African coast, and many other acts of extraneous philanthropy, all draining the public purse. But, money for poor Jack, if worthy of it, education for his bairns, or food for his widow, legalized by government, and supported by British merchants, as yet, it has been a bag of moonshine to think of it.

M. M. K.

The Merchant Service.

(Concluded from p. 420.)

We may very easily imagine that the enquiry on 'Change next day would be, "for what purpose did the ship —— return into port?" Some person more acquainted with the circumstance answers, "The master being an unsteady man was discharged, and in the absence of the owners attempted to run off with the ship, &c., &c." But alas! this example like many others has only a momentary effect on the minds of merchants; they will not be influenced by the fatal accidents which occur to so many merchant vessels, and turn a deaf ear to those truly interested in humanity. The impression which this announcement has upon them for a short time is very unfavorable, not only against the discharged commander, but the whole Merchant Service. Unfortunately for seamen, merchants are much too remiss concerning such matters and fail to derive advantages themselves, as well as in future to appoint men to command, whose

* See page 293 for the form of this ticket.

confidence might be relied upon, and whose sole attention would be directed to the interest of their employers, and the instruction and comfort of their crews.

It may be argued that men can rarely be found who are qualified to conduct their ships as sailors and gentlemen; that is, they are too aspiring in their views, that they will not condescend to improve the condition of poor Jack, or, on the contrary, having risen from foremast men, in many cases have not self command to shew proper respect to their crews, without being so familiar that all authority is forgotten, and the men obey the orders of their officers more from their own will than command. To those who are desirous of maintaining this affirmation, in some cases I admit that it is true; at the same time how can we be surprised at this, when no lucrative inducement is offered to experienced officers, so as to realize a yearly income whereby their families could associate with persons becoming their station in society. Still merchants can uphold another argument against this, "if we pay our officers good salaries we shall expend all our profits, and not be benefited ourselves."

This being of importance, let us examine it, and decide accordingly. Generally speaking, officers are chosen who will receive the lowest salaries, and are, in one respect or the other, competent to navigate vessels to remote quarters of the globe. These men, though not versed in literature, are desirous of appearing respectable, and when abroad of having all the luxuries the country produces. Being frequently men of wild and unprincipled habits, money is squandered without account, and the deficiency must be supplied from another quarter; this, as is well known to seamen, is performed in a manner disgraceful to the Merchant Service, to the great loss of the shipowners, and to the ruin of all confidence placed in the officers. It is a painful duty for any person to expose the manner in which many owners are defrauded by their officers; though it is not notorious, still if merchants made inquiries from persons acquainted with these subjects, undoubtedly they would hear some startling facts which would probably change their opinions and prejudices in favour of talented officers, with more ample remuneration for the support of respectability and unremitting industry. Sufficient has now been said to shew that more care is necessary in the selection of officers, and that it would be advisable to increase their salaries. This, I am fearful, will never be the course pursued by shipowners, until men, impelled by a regard for the prosperity of poor Jack, discuss this important subject in public. Thus valuable opinions would be advanced, leading to the reformation of commanders, and in due time seamen would imbibe the praiseworthy example of their superiors.

Great complaints are brought against foremast men for being unsteady in their habits, both at sea and on shore. If we closely examine this subject, we shall, in many cases, attribute the cause principally to the insobriety of commanders on ship board, and the many inducements by which seamen are led away on shore, with comparatively little regard paid to their spiritual welfare by the mercantile community. Look at the numerous free concerts into which seamen are seduced, look at the society which frequent those places and the docks, consider the obscene language heard in boarding and cooking houses for seamen, look at the very few places where seamen obtain comfortable quarters, and where

instruction is given for their present and future advancement, consider these, and say that proper attention is bestowed on seamen, compared with the valuable services performed by them for their employers.

Another obstacle to the reformation of seamen is the little regard observed by many commanders of Divine Service on board ship on the Sabbath; also the too frequent desire shewn by shipowners and captains of vessels to leave port on Sunday, which circumstance, trifling as it may appear, is the means of spreading dissatisfaction among officers and crew; and, hence, insubordination. Another error of many captains, to which seamen have a great aversion, is striving by all possible means to harass their crews on the Sabbath by superfluous duties. One day in seven is set aside for cessation from labour. I therefore consider that seamen (when practicable) have a right to enjoy the rest of the Sabbath as rational beings; and not, as is now too frequently the case, toiling month after month without feeling the infinite satisfaction which one day in seven affords to their wearied limbs. Sooner then that merchants take into consideration the late excellent remarks of Capt. M. Keane the better; then, and not before, can we expect that seamen will, in every respect, be a superior class of men, and qualified to undertake the responsibilities of officers and shipmasters.

Another grievance of equal importance, and to which great attention ought to be directed, is that of manning merchant vessels with two few hands, which cause dissatisfaction among the crew. We rarely find that English vessels are fully manned, except large East India passenger ships, where a few more hands are considered requisite. Vessels exposed to the fury of the elements, require such skilful management that it is essential they should be prepared to weather a gale with a full complement of stout bodied men, whereby alone, in any emergency they may be safe.

Those bound to foreign climes do not require the same proportion of men to their tonnage as small crafts in the coasting trade; still in each instance more hands might be shipped, without incurring much more expense to the shipowner.

Coasting vessels are seldom manned sufficiently for safety to cargoes in the English Channels without the crew being constantly on deck in stormy weather. The worst of this description of vessels are the Welch and Yorkshire traders; the latter principally sailing from Selby, Goole, and Hull to London. The Yorkshire traders are from 80 to 100 tons, and the latter size carries six hands, viz., master, mate, one man, and three boys. The mate is frequently the oldest apprentice, and the man, not the best of seamen, but one who swaggers over the boys, and compels them to toil incessantly. Any person who frequents the Yorkshire and London traders will at once observe that continual offensive language and quarrelling go on between the master, mate, and boys. The fact is, boys occupy the station of men, and in a short time acquire swearing, smoking, chewing, and grumbling, consider themselves men, and are very disagreeable to those with whom they have to deal. Not only should these vessels be better manned with men of spirit and contentment, but all abusive language ought to be thrown aside, and more attention devoted to the comforts of the crew. But what causes these boys to be dissatisfied? Having to perform duties beyond their strength and experience. Thence curses are lavished on their devoted heads, which in time

produce indifference, whereby they imbibe the bad temper of superiors towards other boys when under their authority. Unhappily dissatisfaction is not confined to these vessels exclusively; when in the course of time they are discharged, their bad habits follow them wherever they go.

I remember lying alongside a large brig in London, 270 tons register, with only eight hands, viz. an unsteady master, mate, four men, and two boys; she sailed to the Baltic, and never carried more than eight hands. As long as this continues, we cannot anticipate that the Merchant Service will be conducted in a manner so as to train the seamen's minds to discipline; to effect this, time is requisite; yet we may look forward to the day when merchant seamen can enter the Royal navy better prepared than at present to withstand the strict routine of discipline, without the least apprehension of being uncomfortable. Much more might be said concerning vessels when shortly manned, still sufficient of the defects have been exposed to direct the attention of men more adequate than myself to decide on this subject.

As much has been said concerning the deficient method of training apprentices to the sea service, perhaps some remarks on the midshipmen of East India ships would not be amiss, as they usually receive a gentleman's education, and therefore ought to form a favorable as well as prominent feature in the mercantile marine of this country. As midshipmen are considered not of much use, but rather in the way, they are not required on board Liverpool ships, but only in London East Indiamen, where the passengers are numerous. From four to ten are taken on board ships from 600 to 1200 tons register: I have seen twelve on board, although this number is not usual, and only occurs with an experienced commander, and a ship of the finest class. The sum paid by midshipmen to ship-owners is generally £50 for the first voyage, £40 for the second, and £30 for the third. They are then supposed to be qualified for a fourth officer's berth, in a couple of years, for the third officer, and so on in rotation: and in the course of 15 or 20 years from first going afloat, with interest and perseverance, they may arrive at the head of their profession. They are allowed the same rations as the men, besides which, each youngster receives £10 to the third officer, so as to procure a large stock of brandy, preserved meats, cabin biscuit, &c., the delicacies of the East Indies, as well as fitting up the berth, and paying a boy who officiates as their steward. After defraying the above expenses according to the voyage, and in return a promise from the commander that the youngsters will be instructed in seamanship, and their morals and comforts attended to, let us suppose that the ship is ready for sea, having ten middies on board, (not including apprentices,) five of whom have never been at sea before.

The scenes of the shore, the prospects of the voyage, and the best mode of subjecting the youngsters to their unbounded authority occupy the mind of the five seniors, while the new recruits are enjoying their dignity walk on the quarter-deck, tickled by the flashy appearance of their gold lace, and blue jacket, with lion and anchor buttons. Butterflies of the hour, what are they below? They exist in a small berth under the care of the third and fourth officers, with a boy to wait upon them, who, from the description of his duty, has received the cognomen

of the midshipman's pup. Navigation occupies the attention now and then of one or two of these youths, but the rest delight in idleness, relating their obscene adventures, drinking grog, smoking, and tormenting their younger messmates to follow their example. All attempts to keep grog, preserves, raisins, &c., out of the reach of these gentry are unavailing; in spite of all law they will drink and live sumptuously. Not content with helping themselves to the wherewithal, they must needs compel the junior middies to assist them, and to resist to the last any enquiry as to the disappearance of this or that.

The mid of course has his hammock-man, who is generally obliging and respectable. Every hammock-man receives from 30*s.* to £2, with the addition of a glass of grog now and then, on a passage to the East Indies; for which he takes the middy's hammock on deck every day, slings it at night, washes six or seven pair of duck trousers weekly, cleans a pair of shoes every morning, and dries his young master's wet jacket. In some ships the middies are divided into two watches, in others three; this is a matter of no great importance, still, if their time were beneficially employed, three watches would allow them more leisure for study; whereas at present, two watches are desirable, as they seldom pass their hours of recreation profitably.

The mids' duties consist in heaving the log, mustering the night watches, keeping a look out on the quarter-deck and forecastle, striking bells, passing orders fore aud aft, looking after the boys in seeing that they keep the decks clean, &c. Their station is the mizen-top, reefiing the mizen-top-sail, stowing the mizen-top-gallant-sail and royal, although when stormy weather appears, and the boatswain calls "all hands to reef topsails," most of them prefer skulking between decks, and running to the lee gangway on the pretence of sea-sickness. A fine evening gives these youngsters the opportunity of shewing their smartness, when the topsails are to be reefed, before a stormy night, for they are at the earings of the fore and main-top-sails; but in their ardour to obtain praise from the captain and passengers, the earings are seldom properly passed, and when a reef has to be shaken out, the frequent alternative is, out knife and cut the earing. There are topmen appointed, who are responsible for the various duties done in their respective tops, so that it would be enough for the young gentlemen to attend to the mizen-mast, and not interfere with the fore and main-top men, who alone should strive to reach that place of honour, the weather earing. In stowing the mizen-top-gallant sail and royal on a squally night the fine-weather mids generally prefer sending the boys aloft before the sail is clued up, and whilst these are rubbing their sleepy eyes, and adjusting their caps, one of the mids leisurely overhauls the halyards, and the rest with great composure prepare the sail for stowing. Nevertheless, in fine weather, four or five young gentlemen may be seen stowing a mizen-top-gallant sail, which occupies a quarter of an hour, and has probably to be stowed again before it satisfies the chief officer.

In work upon rigging, when it is essential to use the tar bucket, a midshipman is frequently considered to forfeit the respect of the young gentlemen should he attempt to assist in tarring or greasing the lanyards, and important duties of the same description on shipboard. They sometimes evince a little pleasure in commencing a mat, or pointing a rope,

[redacted]

their profession, and shewing a good example to their inferiors; still as long as midshipmen are intrusted to serve out water, grog, and provisions, without being superintended by an officer, so long will shipowners continue to be imposed upon by their youngsters. I can with confidence assert that I have seen midshipmen take a pint of spirits, and sometimes more, every morning from the grog cask, when the chief mate was not more than six or seven yards distant; and this pilfering was continued for weeks and months and never discovered. I have frequently seen three or four stolen bottles of preserves in the berth at one time; quantities of grog taken from the fourth officers' chest, and replenished by dirty water; and known a time when the ship's company were deficient of raisins three weeks before arriving in port, because they were all devoured by the hungry middies. Certainly such conduct as this ought to be exposed at the time of occurrence; still, those persons acquainting the captain would be condemned by all the young gentlemen to suffer the most incessant torture and degradation. Many more such instances of which I have been an eyewitness might be adduced, but I consider that sufficient has been said to illustrate that due attention is not devoted to the training of midshipmen for the Merchant Service; that they are allowed too much liberty and indulgence, thereby becoming bad officers.

At present some difficulty is experienced by shipowners in selecting smart officers from their numerous midshipmen, whereas, if properly attended to and instructed they would be the most gentlemanly and finest class of officers in the Merchant Service. Midshipmen consider themselves active and indispensable persons on shipboard, but nearly all seamen who have had an insight into their proceedings think differently! It is to be hoped the time is fast approaching when there will be a reformation, and the unsteady and depraved men so frequently in charge of the mercantile shipping, will be superseded by others more worthy the name of commanders.

To effect this, it is essential that those owners who have midshipmen on board their ships, should take especial care to discharge those whose pernicious principles might be imbibed by youngsters commencing a career afloat, and thereby save the rest. A proper attention should be directed to their comfort as well as to their proper performance of duty.

It is also requisite that each middy should be provided with a quadrant or sextant, and navigation books, with which they should appear on deck every day at seven bells, so as to be proficient in taking observations; the ship's journal should be kept, and the reckoning worked by them should be examined daily by one of the officers; and, every assistance given to those who are not versed in navigation. But more restraint is necessary over those who are desirous of assisting the fourth officer in serving out grog and provisions. A weekly visit from the captain, and a daily one from the chief and second officers, would have a beneficial effect upon the unsettled minds of these youngsters, as they would then feel their seniors were interested in their welfare, and in their turn would consider it their duty to pay attention to their officers' injunctions.

It may be argued, that to adopt the foregoing plan would cause too *much inconvenience*, and not confer any advantage upon the shipowner.

At first, inconveniences would arise, but they would soon be forgotten when honest, smart, and industrious youngsters were replaced for the idle, unsteady, and corrupt middies of the present generation. It is of importance that a principle should be adopted to have them more under subjection; and whatever the improved system may be the sooner it is put into operation the better. At present parents have no safety in sending their sons to sea; if they be midshipmen, they are too often led astray by the example of their messmates; if, on the other hand, they are doomed to serve an apprenticeship they are disgusted with a sailor's life, and obliged tranquilly to submit to the harsh treatment of the officers and crew.

With the gentleman and sailor combined, higher remuneration for officers, vessels better manned, and the comforts of the kind-hearted tars attended to afloat, as well as on shore; this done, then as regards discipline, the merchant sailors of Great Britain would show a decided superiority over the merchant seaman of the whole world. Let all those who are concerned in the shipping interest and mercantile pursuits exert their full energies for manning the Merchant Service with steady, well paid, and experienced officers; and they who employ midshipmen, forward their views in the best possible manner, and have more regard for the preservation of their morals. Let us then with pride and pleasure anticipate that a reformation in the Merchant Service will speedily take place, when the officers will be qualified to fulfil the station of ship-masters with credit to themselves and satisfaction to their employers.

With the sincere desire that exposing the errors of the Merchant Service will assist in effecting a desirable change in the laws relating thereto, I am, &c.,

B. Wilson.

Notice of the City and Commerce of Shanghai.

(Continued from p. 415.)

European commerce is, however, very inferior when compared to the native, and may be divided into two classes. The principal, that of opium, is transacted in the following manner. Four or five vessels filled with the drug remain constantly in the outer anchorage of Woosung in the mouth of the river. Small boats resort to these to receive the quantities for which they have agreed at Shanghai with the captains of the said vessels, or the merchants to whom they are consigned, and at the same time deliver the price. Small vessels with opium come from time to time from India and Hongkong and trans-ship their cargoes into the receiving ships anchored there and return with sycee silver. Neither of these appear in the shipping lists at Shanghai, but their captains and crews constantly pass and repass between the city and Woosung. Indeed this is a game of which no one is ignorant, and it is accomplished with so much freedom that the English authorities do not pretend they are ignorant of it. It takes place however without their *authorising* it and consequently without any breach of the treaty. The

value of the opium imported by these means into Shanghai is calculated at 6,000,000 dollars annually.

The second class of European commerce in the legal trade, has hitherto been experimental. There have been introduced several kinds of woollens and much cottons, principally English, iron, American lead, and various other articles. The exports have principally consisted of sycee silver and raw silk. Of this latter 3,000 bales have already been exported this year, and the total amount will probably be 4,000 or more, almost the half of all the Nankin silk exported from China in former years. Little tea has yet been shipped because of the low prices in England, but if nothing unusual happens, the green teas will be exported before long by this channel, as the black will be by Ningpo and Fuhchow. The first grown principally in the provinces of Nankin and Ankin. The best in the empire is the produce of Taichaw which forms a part of the latter. The best black comes from Hohan and Mocmeng, a province of Quiansi, and from the mountain Mohi in Fukien. It is asserted the black teas can be brought to Shanghai at less expense than to Canton. Some have already come this year. Also it is natural that all the silk of the first quality should be exported from Shanghai, since it can be sold in that market at least from 10 to 20 per cent. lower than in Canton.

In the same way goods woven of silk ought to be exported by this channel, as they are manufactured in the environs with more skill and at lower prices than in the neighbourhood of Canton. The cities, which next to Shanghai are most celebrated for silk manufactories are Suchau, which is distant from it by the river about 34 leagues; Huchau, distant 24; Kinhua 72; Chanchew 24; Vcheu 40; Hancheu 50; and Nankin 100.

The European vessels which have been entered at Shanghai up to the present time, not including the opium traders, are 32 English, 3 American, 1 Hamburg, and 1 Spanish; measuring in all about 10,000 tons. The value of the goods imported in these vessels scarcely amounts to 2,000,000 hard dollars, and that of the exports to about 1,300,000. And calculating the opium imported since the opening of the port at 6,000,000 dollars, we shall obtain 8,000,000 dollars for imports and 1,300,000 dollars for exports. That is 6,700,000 dollars in silver have been exported from China during this time from Shanghai by means of the commerce in European vessels.

If we recall what has been said, and reflect that Shanghai is at the mouth of the Yangtszekiang, and still more that there is no other port accessible to Europeans from the Pei-ho which leads to Peking, and from the Hoangho, which is the first river after the Yangtszekiang, and that these three are the most important in China, and by means of their branches and canals communicate with all the provinces of the empire, we cannot do otherwise than conclude that Shanghai, the port of the wealthy city of Suchau, possesses all the elements necessary to eclipse Canton. Already European goods are sold in Nankin, and in other great cities, for half the price they cost three years back, and that must cause an increased consumption, just as the exportation of tea, and more especially of silk, will increase, without doubt, in consequence of the *diminution of expense* here.

And passing from general considerations to that of the commerce with the Philippines, which is the principal object of the present review, we must conclude that the traffic between these isles and Shanghai may come to be very active. To form an opinion nearer current on this point it will be convenient to enumerate the most important articles of mutual import and export.

IMPORTS.

Rice.—Shanghai, being a cotton district, does not abound in rice; it is the port of many great cities, and besides a market whereon this grain is remitted at times to those of the north. It is natural then that in ordinary years its price should be higher here than towards the south, although in the present year it has been the contrary.

Sugar.—The whole exports from the Philippines will be insufficient to supply the wants of Shanghai; and although at this moment the prices do not show a great amount of speculation, there are years in which, from the failure in the crops of Formosa and Fukien, or from greater demands from the north, there rise to nearly double those of the present year. It is to be noticed that with equal quality of whiteness, the sugars of Formosa are here preferred to those of Manila, at least until the natives become accustomed to the latter.*

Cotton.—Is consumed in great quantities in the district of Shanghai, and also exported to [illegible] the [illegible] is produced in the plains around the city. [illegible] a picul is the best, but there are [illegible] and 23. At present being the lowest [illegible]. That of the Philippines is considered [illegible]

Hemp.—The Chinese have [illegible] from 9 to 9 dollars per picul. They make great [illegible] and other materials. It is said [illegible] in a part to which 100 vessels [illegible] and small craft. It is very probable that when the [illegible] Manila hemp there will make use of it as the English [illegible]. At present, however, they seem little disposed [illegible]

Tobacco-leaf.—[illegible] will the European [illegible] the natives will be [illegible] for the import [illegible]

Liquid Incense.—[illegible] exemption of this article [illegible] the Philippines will in general [illegible] the [illegible] of other [illegible] however here. [illegible] and for the same [illegible] and.

Tobacco.—[illegible]

It is known that the [illegible] Manila is [illegible] and sent to Chusan [illegible] and is esteemed [illegible]

quality, it appears to me quite possible to introduce by degrees the use of the cocoa-nut oil, especially for the wealthy Suchau.

Sapan-wood.—Is never lower than 2½ dollars, and may easily rise to 3½, so that it is an excellent object of speculation.

Humps.—Those of moderate size are in request here, not the small as in Fukien.

Birds' Nests, Bicho de mar, Sharks fins, Deer's horns, Canes, Buffalos' hides.—These articles arrive from the southern part of the country, and if it suited to transport them from Manila, it seems preferable to bring them direct to Shanghai.

Betel Nut.—Of this there is little consumption, and what comes from Sumatra is generally lower than that from Manila.

Hides, for making Glue.—No glue is made in this district.

Wax.—Scarcely any is used.

Sulphur.—Private persons cannot buy it, and Government uses the native produce.

Molave, Red Wood, Ebony.—These woods are here accounted a good branch of commerce, and although much comes from the Straits of Malacca, probably those of the Philippines would always afford a good result.

Lead.—At present is from 6 to 7 dollars a pecul, and consequently the Spanish would afford some profit, but it cannot be forgotten that the North American can supply that article at a lower price than ours, because they come in search of teas and silks, and have nothing to bring unless hard dollars, which are at a heavy discount in China.

Wines.—Perhaps the use of our sweet wines may be gradually introduced, especially for the neighbouring city of Suchau, where enormous sums are spent in feasts and intemperance. But this must be the work of time, as they have native wines very cheap, which to them appear very good. What is usually drunk is sold in retail at 14 to 16 maravedis a bottle, (4 to 5 cents,) and the best brandy of Shantung costs under a real, (ten cents;) so that they are frightened at the mention of 3 or 4 reals for a bottle. What please them best are liqueurs, such as Noyeau, Parfaite Amour, and Anisette.

(To be continued.)

BRITISH ASSOCIATION.—*Cambridge, June 18th*, 1845.

THE Members assembled in the Senate House at eight o'clock, and the Dean of Ely having taken the chair, stated that this meeting of the Association had a distinctive character from all preceding, by its connection with the Magnetic Conference, which would include scientific men from all parts of Europe, who had resolved to meet on this occasion, and compare and co-ordinate their observations on magnetic and meteorological phenomena. He named several of the eminent men who had come to take a part in the conference, and alluded feelingly to the absence of Gauss, the great patriarch of magnetic science; and concluded by observing that the duties of his office were now fulfilled, and he had only to give place to Sir J. Herschel, whom he remembered as a competitor, but not as a rival, and with whom were asso-

ciated those reminiscences which youth formed in its tenderness, and age hallowed in its memories.

Sir J. Herschel, who was suffering from a severe cold, on taking the chair, briefly adverted to the eulogy of the Dean of Ely, as characterized by the partiality of youthful friendship; and then, apologizing for his defects of voice, read the following address:—

The President's Address.

Gentlemen.—The terms of kindness in which I have been introduced to your notice by my predecessor in the office which you have called on me to fill, have been gratifying to me in no common degree—not as contributing to the excitement of personal vanity, (a feeling which the circumstances in which I stand, and the presence of so many individuals every way my superiors, must tend powerfully to chastise,) but as the emanation of a friendship begun at this University when we were youths together, preparing for our examinations for degrees, and contemplating each other perhaps with some degree of rivalry, (if that can be called rivalry from which every spark of jealous feeling is absent.) That friendship has since continued, warm, and unshadowed for a single instant by the slightest cloud of disunion, and among all the stirring, and deep-seated remembrances which the sight of these walls within which we are now assembled arouse, I can summon none more every way delightful and cheering than the contemplation of that mutual regard. It is, therefore, with no common feelings that I find myself now placed in this chair, as the representative of such a body as the British Association, and as the successor of such a friend and of such a man as its late President.

Gentlemen.—There are many sources of pride and satisfaction, in which *self* has no place, which crowd upon a Cambridge man in revisiting for a second time this University, as the scene of our annual labours. The developement of its material splendour which has taken place in that interval of twelve years, vast and noble as it has been, has been more than kept pace with by the triumphs of its intellect, the progress of its system of instruction, and the influence of that progress on the public mind, and the state of science in England. When I look at the scene around me—when I see the way in which our sections are officered in so many instances by Cambridge men, not out of mere compliment to the body which receives us, but for the intrinsic merit of the men, and the pre-eminence which the general voice of society accords them in their several departments—when I think of the large proportion of the muster-roll of science which is filled by Cambridge names, and when, without going into any details, and confining myself to only one branch of public instruction, I look back to the vast and extraordinary developement in the state of mathematical cultivation and power in this University, as evidenced both in its examinations and in the published works of its members, now, as compared with what it was in my own time—I am left at no loss to account for those triumphs and that influence to which I have alluded. It has ever been, and I trust it ever will continue to be, the pride and boast of this University, to maintain, at a conspicuously high level, that sound and thoughtful and sobering discipline of mind which mathematical studies imply. Independent of the power which such studies confer as instruments of investigation, there never was a period in the history of science, in which their moral influence, if I may so term it, was more needed, as a corrective to that propensity which is beginning to prevail widely, and, I fear, balefully, over large departments of our philosophy, the propensity to crude and overhasty generalization. To all such propensities the steady concentration of thought, and its fixation on the clear and the definite, which a long and stern mathematical discipline imparts, is the best, and, indeed, the only proper antagonist. That such habits of thought exist, and characterize, in a pre-eminent *degree, the* discipline of this University, with a marked influence on the sub-

sequent career of those who have been thoroughly imbued with it, is a matter of too great notoriety to need proof. Yet, in illustration of this disposition, I may be allowed to mention one or two features of its Scientific History, which seem to me especially worthy of notice on this occasion. The first of these is the institution of the Cambridge University Philosophical Society, that body at whose more especial invitation we are now here assembled, which has now subsisted for more than twenty years, and which has been a powerful means of cherishing and continuing those habits among resident members of the University, after the excitement of reading for academical honours is past. From this society have emanated eight or nine volumes of memoirs, full of variety and interest; and such as no similar collection, originating as this has done in the bosom, and, in great measure, within the walls of an academical institution, can at all compare with; the Memoirs of the Ecole Polytechnique of Paris, perhaps, alone excepted. Without undervaluing any part of this collection, I may be allowed to particularize, as adding largely to our stock of knowledge of their respective subjects, the Hydrodynamical contributions of Prof. Challis, the Optical and Photological papers of Mr. Airy, those of Mr. Murphy, on Definite Integrals, the curious speculations and intricate mathematical investigations of Mr. Hopkins on Geological Dynamics, and more recently, the papers of Mr. De Morgan on the foundations of Algebra, which, taken in conjunction with the prior researches of the Dean of Ely and Mr. Warren, on the geometrical interpretation of imaginary symbols in that science, have effectually dissipated every obscurity which heretofore prevailed on this subject.

The elucidation of the metaphysical difficulties in question, by this remarkable train of speculation, has, in fact, been so complete, that henceforward they will never be named as difficulties, but only as illustrations of principle. Nor does its interest end here, since it appears to have given rise to the theory of Quaternions of Sir W. Hamilton, and to the Triple Algebra of Mr. De Morgan himself, as well as to a variety of interesting inquiries of a similar nature, on the part of Mr. Graves, Mr. Cayley, and others. Conceptions of a novel and refined kind have thus been introduced into analysis, new forms of imaginary expression rendered familiar, and a vein opened, which I cannot but believe will terminate in some first-rate discovery in abstract science.

Neither are inquiries into the logic of symbolic analysis, conducted as these have been, devoid of a bearing on the progress even of physical science. Every inquiry, indeed, has such a bearing, which teaches us that terms which we use in a narrow sphere of experience, as if we fully understood them, may, as our knowledge of nature increases, come to have superadded to them a new set of meanings and a wider range of interpretation. It is thus that modes of action and communication, which we hardly yet feel prepared to regard as strictly of a material character, may, ere many years have passed, come to be familiarly included in our notions of light, heat, and electricity, and other agents of this class; and that the transference of physical causation from point to point in space, nay, even the generation or developement of attractive, repulsive, or directive forces at their points of arrival, may come to be enumerated among their properties. The late marvellous discoveries in actino-chemistry, and the phenomena of muscular contraction as dependent on the will, are, perhaps, even now preparing us for the reception of ideas of this kind.

Another instance of the efficacy of the course of study in this university, in producing not merely expert algebraists, but sound, and original mathematical *thinkers*—(and, perhaps, a more striking one, from the generality of its contributors being men of comparatively junior standing,) is to be found in the publication of *The Cambridge Mathematical Journal*, of which, already four volumes, full of very original communications, are before the public. It was set on foot in 1837, by the late Mr. Gregory, Fellow of Trinity College,

whose premature death has bereft science of one who, beyond a doubt, had he lived, would have proved one of its chief ornaments, and the worthy representative of a family already so distinguished in the annals of mathematical and optical science. His papers on the 'Calculus of Operations,' which appeared in that collection, fully justifies this impression, while they afford an excellent illustration of my general position. Nor ought I to omit mentioning the Chemical Society, of whom he was among the founders, as indicative of the spirit of the place, untrammelled by abstract forms, and eager to spread itself over the whole field of human inquiry.

Another great and distinguishing feature in the scientific history of this place, is the establishment of its Astronomical Observatory, and the regular publication of the observations made in it. The science of astronomy is so vast, and its objects so noble, that its practical study for its own sake is quite sufficient to insure its pursuit, wherever civilization exists. But such institutions have a much wider influence than that which they exercise in forwarding their immediate object. Every astronomical observatory which publishes its observations, becomes a nucleus for the formation around it of exact practice, a standing and accessible example of the manner in which theories are brought to their extreme test, a centre, from which emanate a continual demand for and suggestion of refinements and delicacies, and precautions in matters of observation and apparatus, which re-act upon the whole body of science, and stimulate, while they tend to render possible, an equal refinement and precision in all its processes. It is impossible to speak too highly of the mode in which the business of the institution is carried on, under its present eminent director, nor can it be forgotten in our appreciation of what it has done for science, that in it our present, Astronomer-Royal first proved and familiarized himself with that admirable system of astronomical observation, registry, and computation, which he has since brought to perfection in our great national observatory, and which have rendered it, under his direction, the pride and ornament of British science, and the admiration of Europe.

Gentlemen, I should never have done if I were to enlarge on, or even attempt to enumerate the many proofs which this university has afforded of its determination to render its institutions and endowments efficient for the purposes of public instruction, and available to science. But such encomiums, however merited, must not be allowed to encroach too largely on other objects which I propose to bring before your notice, and which relate to the more immediate business of the present meeting, and to the general interests of science. The first, and every way the most important, is the subject of the magnetic and meteorological observatories. Every member of this association is, of course, aware of the great exertions which have been made during the last five years, on the part of the British, Russian, and several other foreign governments, and of our own East India Company, to furnish data on the most extensive and systematic scale, for elucidating the great problems of terrestrial magnetism and meteorology, by the establishment of a system of observatories all over the world, in which the phenomena are registered at instants strictly simultaneous, and at intervals of two hours, throughout both day and night. With the particulars of these national institutions, and of the multitude of local and private ones of a similar nature, both in Europe, Asia, and America, working on the same concerted plan, so far as the means at their disposal enable them, I need not detain you; neither need I enter into any detailed explanation of the system of magnetic surveys, both by sea and land, which have been executed, or are in progress, in connection with, and based upon the observations carried on at the fixed stations. These things form the subject of Special Annual Reports, which the Committee appointed for the purpose have laid before us at our several meetings, ever since the commencement of the undertaking; and the most recent of which will be read in the physical section of the present meeting in its regular course. *It is sufficient* for me to observe, that the result has been the accumulation

of an enormous mass of most valuable observations, which are now and have been for some time in the course of publication, and when thoroughly digested and discussed, as they are sure to be, by the talent and industry of magnetists and meteorologists, both in this country and abroad, cannot fail to place those sciences very far indeed in advance of their actual state. For such discussions however, time must be allowed. Even were all the returns from the several observatories before the public, (which they are not, and are very far from being,) such is the matter to be grappled with, and such the multitude of ways in which the observations will necessarily have to be grouped and combined, to elicit mean results and quantitative laws, that several years must elapse before the full scientific value of the work done can possibly be realized.

(*To be continued.*)

Voyage of the Heroine from India to Sydney, through Torres Straits.

The Schooner Heroine under my command, left Singapore for Balli and Sydney on 15th November, 1844, and arrived off the north entrance of Balli Straits on the 24th, at 6 P.M., having a brisk S.S.W. wind, and the tide not being fair made short tacks, under the north point of Balli until midnight, when we worked through. At midnight, 25th, the south point of Balli S.E., at daylight rounded the point for the eastern anchorage, not thinking it advisable, as the monsoon seemed to be set in, to lay in the W. bay. 26th, 1 P.M., the flood setting strong to the northward, and the wind being light, stood in towards the reefs, and came to in 9 fathoms.

On Monday, 2nd December, sailed from Balli, with light westerly winds, for a few days after which I had light southerly winds, and fearing that I should have a tedious passage into the S.E. trade, and after that perhaps encounter strong east winds through the passage south of New Holland, I determined to run for Torres Straits, which route I had formerly recommended to Capt. Banks, of the steamer Victoria, who thought of going from Singapore to Sydney. I carried light west winds for a few days, when the wind hauled to the eastward, light and baffling, being then between Sandalwood and Sumbawa, through which passage I had passed five times at the same time of year, December, which is considered about the strength of the monsoon. After several days drifting about, I found the current set so strong to the westward, that when a breeze sprung up from the eastward, I bore away for the south of the island; after having beat to the eastward of Sandalwood, the full moon brought in a west wind, which carried us into Copang in 36 hours, where I anchored on 27th December, having been 25 days making a passage which I had often performed in 2½ days from east and west.

In Timour every thing was in a bad state from the want of rain, which in the months of November to March falls copiously there; the want of water on Semoa was so great, that one of my boats that went over there for provisions, exchanged one bottle of water for a goat. I passed through the straits of Semoa on the 31st December, and had mostly light west winds and calms until past Port Essington, (excepting a strong breeze during new moon,) when N. and N.E. winds prevailed nearly to Booby Island, where I again got west winds.

After leaving Raines Island, two days with S.E. winds, a west wind came for three days, and then hauled to N.E., afterwards settled at S.E. and E., light and variable. I passed to the eastward of Alert reef, and taking every advantage of a slant of wind; on the 16th of February, at 10 A.M., saw a reef ahead, bearing S.b.W., and at within half a mile of the N.W. extreme; it is

in form of a horse-shoe, and deep water inside the opening to W., lat. 21° 5′ S., and long. 152° 50′ E., about ten miles in extent; the barriers were seen about W.S.W. from the royal mast head; I called the reef Heroine's reef, after my schooner; the next day, 17th, saw the barriers at noon, in 22° 2′ S., and 152° 58′ E. bearing S.S.E., a sand bank and the reefs to the northward and westward, N.N.W. tacked, to weather the detached portions; the water seemed clear in some gaps of the reefs: after this had light N. winds until my arrival in Sydney.

M. Mackenzie.

[With the foregoing we received the annexed sketch of the *South part of the island of Balli.* In the harbour of *Tanjong Timor*, (inside the island *Pulo Serangan*, below B in the sketch,) it is high water at full, and change at 11h. 10m., the flood setting to the northward. The *anchorage* is in lat. 8° 45′, long. 115° 18′ E.

The following references will be useful:—

A, Booket; B, Badong; C, trees; on the right bank of the rivulet below C is Cota; D, two trees; E, Lessa Menore; F, Tabanon. A line from A through B will reach Cassomba at about the distance that B is from the furthest land below it.

We give this as we have received it with neither scale nor compass.

Passage of the "Heroine" through Torres Straits.—The passage through Torres Straits from India to Sydney has hitherto been deemed almost impracticable. Considering that an account of the passage would be interesting to the public, we have been favoured with the following extract from the journal of the *Heroine*:—"At daylight on the 17th January, we made Booby Island and the adjacent islands; it falling calm, dropped the kedge, and visited that supposed place of refuge, which we found in a most dilapidated state: the post office or box, in which the letters and a journal had been deposited, was almost in pieces, and the documents were nearly all destroyed; the provisions also were in a state of decomposition. As one of H. M. surveying vessels had visited the island, it is to be regretted that they did not erect a mere shed to shelter them from the weather. Wayed with light winds from the N.N.W. and steered S.E. for Endeavour Straits, carrying from three to seven fathoms (sand); 2h. 30m. P.M., brisk breezes from N.W., Wallis Island S.b.W.; Booby Island N.W. ½ N.; came suddenly into quarter less three fathoms (hard sand); hauled off to the E.S.E., and gradually got deep water, but passed over it into quarter less four fathoms, with Booby Island bearing N.W., just visible from the topsail yard, and Wallis's Islands in one. Rounded Cape Cornwall at sundown, at the distance of a mile and a half, and then steered S.E.b.E. through Endeavour Straits; 10 P.M., wind falling light, dropped the kedge in nine fathoms (mud); Cape Cornwall N.W.b.N., and the island on the reef off Port Lihou N.; nine fathoms (mud).

18th, 4 A.M., weighed, with a light air from the northward, and at 8h.

passed between Possession Island and the two small ones off its N.W. end, carrying not less than nine fathoms (mud), quite close to the islands. We landed on the latter, and procured a quantity of grass for the stock; 9 A.M., came to with the kedge, it being calm, in ten fathoms (sand and shells), Mount Adolphus E.N.E., Possession Island W.b.S.; went on shore on the main land, and by sending a boat in shore found a spring of fresh water, a little distance from the beach; the bearings are Possession Island N.W.b.W., and Mount Adolphus just shut in with the point of the main land; filled up our water here—there is apparently a good run of water at times. At 2 P.M., weighed with the ebb tide, (running to the S.E.) and steered for the south end of Mount Adolphus having six fathoms, (sand and shells,) and then hauled up for the Albany Islands, leaving two small rocks and a sand bank on our larboard side, carrying not less than ten fathoms (sand and shells), and steering S.S.E.; sundown, light winds from W.N.W., Mount Adolphus, N. ½ E.; Turtle Island, S.S.E.; Albany Island, N.W. ½ W.; the Brothers, E.b.N.; a sand bank S.E.b.S.; and a reef S.E., the vessel running along them at the distance of two miles. Midnight, calm; came to in ten fathoms; Turtle Island W., distant one mile and a half. 19th, 3 A.M., wayed with a light air from the northward; at 7 A.M., it falling calm again let go the kedge; 10h. 30m. A.M., weighed with a fresh breeze from the northward, steering S.E. ½ S.; at noon, gentle breezes and cloudy, from N.N.E., steering S.E.; Turtle Island N. ½ W., a reef bearing N., extreme of land S.b.E.; carrying twelve fathoms (sand and shells) two miles off shore; it is moderately high, with ridges of white sand; 3h. 30m. P.M., wind hauling from the eastward, in all studding sails and braced up; 4 P.M., steering close to the wind, larboard tack on board, a long sand bank, S.E. ¾ S., Cairncross S.E.b.E., and a low woody island E.; shoaled suddenly into three fathoms and a half (hard sand), but carried the same water until within half a mile of the sand bank, and then tacked to the N.E.; sundown, light breezes from E.; small island E.S.E., Cairncross S.E. ½ S., and the sand bank with the extreme of the land bearing S.; 8 P.M., finding the tide setting strong to the westward, came to in fifteen fathoms (sand and shells), a quarter of a mile off Cairncross; went on shore for turtle, but found the natives had been before us.

20th, moderate breezes from E.; 10h. 30m., wayed with the ebb, and stood to the N.N.E., carrying sixteen fathoms (soft clay;) noon, stiff working breezes, passed close to a small coral patch, with apparently very little water on it, Woody Island S.S.E., Cairncross S., a sand bank off the north reef, N.N.E.; 2h. 30m., tacked close to the sand bank in seven fathoms (stiff sandy clay); 4h. passed between the low island and the north reef, carrying fourteen fathoms (grey mud); Cairncross and the low island on S.W.; sundown, working to windward, a reef to the N.W., extremes of a reef N.b.W., to N.E.b.E., Cairncross just visible S.W., the end of the reef off Woody Island W.; 7 P.M., finding we were losing ground, came to with nearly the above bearings, in sixteen fathoms (soft blue clay). 21st, light breezes from the eastward; 11 A.M., wayed with the ebb and worked to windward between the two reefs, the north one, and the reef off Woody Island; noon, strong breezes from the eastward, with a short jump of a sea, working between the north and south reefs, the former being steep close to, getting nineteen fathoms in stays, and the latter gradually shoaling in most parts, but carrying from seventeen to twenty fathoms between them (sand and shells); sundown, more moderate, with occasional showers of rain; extremes of north reef, E.N.E. to N.W., and an opening in the south reef S., with a clear space to the S,E.; 7 P.M., came to in seventeen fathoms (soft mud), on the end of the south reef; midnight, brisk breezes, with a short swell.

22nd, brisk breezes, and cloudy; 1 A.M., a heavy squall of wind and rain *from the eastward*; daylight, wayed, and stood to the N.E.; 5, tacked,

NAVAL RETIREMENT.—"Admiralty, August 1, 1845. Parliament having granted money for the purpose of covering the expense of providing Retirement to 300 Captains of the Royal Navy, who shall be above the age of fifty-five, or in some instances above the age of fifty, on the following principle, viz:—

"That those Captains who shall be at present, or who shall come in turn to be, on the Half-pay List of 14s. 6d. a day, and shall be above the aforesaid ages, may be placed on the Retired List at £1 a day, with the designation of Rear-Admiral, and their widows to be entitled to pensions of £120 a year.

"Those Captains who shall be at present, or when they would come in turn to be, on the Half-pay list of 12s. 6d. a day, may be placed on the Retired List at 18s. a day, to be increased to £1 a day, and to have the advantages of the preceding clause when they would have come in turn to receive the 14s. 6d. on the Effective list; and should they die while on the 18s. List, their widows to be entitled to £110 a year.

"Those Captains who shall be now on the Half-pay List of 10s. 6d. a day may be placed on the Retired List at 16s. a day, to be increased to the foregoing scales and advantages as they would have respectively come in turn to have received the higher rates of half-pay aforesaid on the Effective List; and in the event of their death while on this 16s. List, their widows to be also entitled to £110 a year.

"My Lords Commissioners of the Admiralty deem it right to give this public notice hereof, and to direct such Captains as shall be desirous of being placed on the Retired List, on the terms stated, to send in their names, specifying their respective ages, to me, for their lordships' information, prior to the 1st of October next, on which day the increased rates of pay will commence, should a sufficient number prove to be desirous of availing themselves of this offer.

"Those officers who possess good-service pensions, and who decide on accepting the Retirement, will be allowed to retain such pension until they would have come in turn to be placed on the Flag-Officers' List, had they continued on the Effective List.

"Such Captains as may be out of Europe, on service or otherwise, and who may be desirous of accepting this Retirement, will not be excluded in consequence of not sending their application prior to the 1st of October next.

"W. A. B. HAMILTON."

With respect to the Flag-Officers, it is not intended that the Retired Captains, promoted to Rear-Admirals, shall count in the List of 150. That number will be kept up, exclusively of the Retired officers, and will be considered the Effective List. There are at present 161 Flag-Officers on the List, and these are to be reduced by deaths to 149, and then the Senior Captain on the List will obtain his flag promotion. Now, eight Admirals have died within the last six months, and from the advanced ages of the Flag-Officers it may naturally be expected that the number will be reduced to 149 before next June, when the promotion of a Captain to a Flag-Officer will take place.

The Effective List of Captains are to be reduced to 400. On the 1st of July there were 714 on the List. Now, if 300 Captains accept the Retirement offered, there will remain 414, or perhaps by the month of October, 412. Assuming that the Admiralty intend to continue the system of promoting one Commander for every three deaths of Captains, taking the average number of deaths for the last six months, the List will be reduced to 400 by next July, when the List of 400 will then be kept up by promotion from the Commanders' List, as the vacancies occur in that of the Captains. Taking into consideration that the Captains' List will be less liable to casualties by death from 300 of the present number having been taken from it, the scheme of Retirement will be greatly to the advantage of Commanders,

who will not only be promoted as death vacancies occur in the List of 400, but they will also benefit by the vacancies which must be created by the promotions of Captains to Admirals as deaths occur among the Flag-Officers.

Thus, if the Retirement should be accepted in the course of twelve months from October next, we shall most likely have half a dozen Captains promoted to the rank of Admiral, and nine or ten Commanders made Captains, and in the year following, estimating from the average number of deaths, there will be sixteen new Admirals, and perhaps thirty new Captains, which will be nine more promoted within twelve months than have been promoted for the last four quarters.

We have heard nothing of any change in the system of promotion of Lieutenants to Commanders, or of any alteration tending to affect the other grades of the Service. But we trust the list of Masters will be revised with advantage to that class of officers.—*Herald.*

Captive Seamen.—The brig Sea Witch, Captain Basker, has arrived at Plymouth from the coast of Africa, having passengers John MacDonald, able seaman, and William Honey, boy belonging to the brig Courier, Capt. W. Vaughan and George Osborne, seaman, belonging to the brig Margaret, Capt. Northwood. These men are the last of those captured by the Moors last year at the Bay of Arguin, on the N.W. coast of Africa, when in search of Guano. MacDonald describes his captivity as being one continued succession of misery. They left London on the 29th of April, 1844, and when in a boat endeavouring to barter with tobacco, &c., for the redemption of Capt. Northwood, and part of the crew of the Margaret were treacherously assailed by the Moors on the 1st of June. The mate and three of the hands belonging to the Courier were shot dead.

The above individuals were ransomed on the 1st of May last through the humane and indefatigable perseverance of Capt. Isemonger of the bark Africanus.

Arctic Expedition.—The following details of the expedition are of interest:—"Whale Fish Islands, July 11.—Here we are, laden and moored in a snug little cove among the Whale Fish Islands, east coast of Greenland, lat. 69° 9′, long. 53° 10′ W. One would have hardly thought it possible for two such ships as the *Erebus* and *Terror* to have taken on board all the provisions, &c., that were on board the transport, but with very little exception such is the case. I certainly never saw any ships so deep before, and I felt anxious, like the boy with a walnut-shell in a basin of water, to see if the vessels could bear it. One thing is certain, our fellows, who are in high spirits, and in robust health, will make a large hole in the comestibles every day, and therefore we shall 'improve our sailing qualities as we lighten,' as they say of the Surveyor's ships. The weather here is delightful. We have the sun all the twenty-four hours, and the middle of the day is really very warm, notwithstanding from the top of the island you can count, speaking within bounds, at least a thousand icebergs. The transport leaves to-morrow, and we pursue our voyage on Monday. We have received accounts from the Danes that the state of the ice to the northward is very favourable to our enterprise. This is very gratifying, and will be an additional incentive to our gallant chief to push on, though with all the zeal and freshness of youth he has the stability, prudence, and caution of the sexagenarian; and while considering the glorious advantages which he would reap from complete success, he, nevertheless, calculates the sacrifice which he must *inevitably* risk. But who knows? We may get through this year. Then *how delighted* I should be to pitch an upper-deck load overboard, consisting

of forty tons, and nearly one hundred casks. Our passage out was a very fair one; but a small allowance of bad weather, and that not so very bad for us to feel it much. Large collections have already been made in natural history, especially in marine animals, such as *crustaciæ medusæ*, &c., several hundred in number, and a great many of a new kind. We are working away here from four in the morning until six. We have then some shooting until noon. There are quantities of eider duck here; they resort to this latitude in the breeding season. As yet we have seen no ice except bergs, which are considered as such by the whalers. For two days previous to our reaching here we were threading our way through them. It is a grand sight witnessing one of the icebergs capsize; they come over with the reverberating noise of thunder, and, generally speaking, gradually fall to pieces —P.S. I have written this hasty letter by the midnight sun."

The annexed has been promulgated amongst the officers and men of the American Navy:—

"General Order.—Information has been received at this department that Her Britannic Majesty's ships *Erebus* and *Terror* are proceeding to make a further attempt for the accomplishment of a north-west passage by sea from the Atlantic to the Pacific Ocean. In compliance with the request of the British Government, communicated by Her Majesty's Minister at Washington, and to the end that the Government of the United States may manifest its interest in the effort to advance the bounds of human knowledge, all officers in the Naval Service of the United States are hereby authorized and directed to afford every assistance in their power, in case of need, to the Commanders of these vessels in promotion of the object of the expedition.

"Naval Department, June 11. George Bancroft."

The Baretto Junior returned to Deptford on the 11th of August.

New Lighthouse on the Goodwin.—On the 16th of July some of the Elder Brethren of the Trinity Board put down an iron tube of two feet six inches in diameter into that part of the Goodwin Sands which is most dangerous, as a preliminary to building a Lighthouse thereon. It is on the Calipers, and at a short distance from a bank which forms a steep declivity to the depth of ten fathoms. The tube descended twenty-two feet into the sand in an astonishingly short time by the application of Doctor Potts' process, in which atmospheric pressure is the principal agent.—*Times.*

The Murder of the Boat's Crew of the Wasp.

The trial of the persons charged with piracy, and with the murder of ten Englishmen belonging to her Majesty's ship Wasp, was concluded on Saturday at Exeter.

The prisoners were placed at the bar in the following order:—Janus Majaval, Francisco Feriera de Santo Serva, Manual Jose Alvez, Florenco Ribiero, Juan Francisco, Jose Maria Martinos, Antonio Joaquim, Sebastian de Santos, Manoel Antonio, and Jose Antonio. They were all dark-looking men, and appeared to be well-fitted for the trade in which they were engaged—brought up to it, in all probability, from early life.

Mr. Sergeant Manning (for the prisoners) claimed to have a jury composed of half Englishmen and half foreigners.

The prisoners being called upon to plead,

Mr. Sergeant Manning said, he considered the indictment bad in point of form, and he should advise the prisoners to demur to the indictment. He said the indictment stated that the prisoners, with force and arms, on the high seas, in and upon one Thomas Palmer, then being on board a certain vessel called the *Felicidade*, did make an assault, &c. Now this being a

statutable offence, the indictment should have concluded *contra formam statuti.*

Mr. Baron Platt considered murder to be an offence at common law, and that the indictment was good.

The prisoners then pleaded not guilty, and a jury *de medietate* was sworn, and they were charged with the prisoners.

The trial occupied the whole of Thursday and Friday.

On Saturday the Judge (Baron Platt) summed up, stating it to be his opinion that the Felicidade was in the legal custody of the Queen's officers, and that the prisoners were also in legal custody; and any person killing the officer or his men were guilty of murder. If they were satisfied that these prisoners conspired together to slay the Englishmen on board, they being then beyond all question in the peace of the Queen—if they conspired together to carry out that wicked design, and any one of them gave a mortal wound, all those who conspired together and joined in assisting him, every one of those were undoubtedly guilty, although his hand might not have inflicted the blow. The scales of justice were placed in their hands, their duty would be to balance them, to look at the evidence dispassionately, without favour or fear, and if they found that the scale in which the measure of guilt was placed was so heavy as to make the beam preponderate, it would be their duty to return a verdict of guilty against those who had been proved to have been engaged in the affray; if the scales were even, they would give the prisoners the benefit of it; if the balance were the other way, of course the prisoners would be entitled to an acquittal. It was said that the lives of the prisoners depended on their breath;—let them not forget those who had been sacrificed. They would weigh the evidence as it regarded each individual prisoner, and pronounce that verdict which their consciences dictated.

The jury retired for an hour and then re-entered the court amidst the most profound silence, and returned a verdict of Guilty against Majaval, Serva, Alves, Ribiero, Francisco, Martinos, and Joaquim; and Not Guilty as regarded Dos Santos, Manoel and Jose Antonio.

His Lordship then, in the most impressive manner, passed sentence of death upon the seven prisoners who had been convicted.

The prisoners wished to have time to write to the Queen of Spain on the subject.

Sergeant Manning again pressed that his objections might be reserved for the opinion of the judges.

Baron Platt said he would consult his brother Erle, but he would not pledge himself further, as his opinion was very strong upon the point.

The prisoners have been respited until an early day in October.

Examination of the Officers of the Royal Mail Steam Packet Company.

(Continued from p. 424.)

15.—On 16th November, 1846, in N. lat., the mean of several observed altitudes of the star Arietis reduced to the true altitude was 43° 0′ 0″, and at the same time that of the star Marcale was 60° 10′ 0″; required the latitude.

16.—On 22nd April, 1846, in lat. by account 45° 3′ 0″ N., and long. 45° 0′ 0″ W., the following observations were taken to determine the latitude (at an interval of ten minutes between the observations). Greater altitude 56° 24′ 00″. Lesser altitude 56° 1′ 00″.

17.—On 20th April, 1846, in lat. by account 49° 0′ 0″ N., and long. 20° 0′ 0″ W., at 7h. 41m. 35s. A.M. the observed altitude of the sun's LL was

18° 22′ 00″, and at 11h. 30m. 28s. A.M. it was 49° 23′ 00″ bearing by compass the ship's course during the elapsed time, being S.E.b.E. ½ E. with the wind west sailing at the rate of eight knots an hour, the height of the eye being 18 feet above the level of the sea. Required the lat. when the greater altitude was taken.

18.—On 4th July, 1846, at 11h. 19m. 0s. P.M. in lat. by account 46° 45′ 0″ N., and long. 22° 30′ 00″ W., the observed distance of the moon's FL was 72° 34′ 00″; required the altitude of the star *a* Aquilæ and the Moon to find the true distance.

19.—On 8th October, 1846, in lat. 33° 22′ 00″ N. and long 71° 6′ 0″ W., the following lunar observation was taken:—Time per chronometer 9h. 34m. 4s. P.M.; obs. alt. Marcab 70° 51′ 00″; obs. alt. moon's LL 10° 41′ 0″; obs. dist. NL 81° 25′ 15″; height of the eye above the sea 18 feet. Required the longitude.

20.—On 8th October, 1846, at 4h. 30m. 0s. P.M., in lat, 33° 45′ 00″ N., long. by account 76° 0′ 0″ W., when a chronometer showed 9h. 19m. 2s. (Greenwich mean time) the observed altitude of the sun's LL was 15° 16′ 50″, and the height of the eye above the sea 18 feet; required the longitude.

21.—On 5th August, 1846, at 4h. 7m. 30s. P.M. the following altitude of the sun's LL and time by chronometer was taken to determine the longitude, no observation was afterwards obtained to determine the latitude, nor any during the last three days, which makes the latitude doubtful when the observation was taken, required the greatest error to which the longitude by chronometer is liable, supposing the error in latitude does not exceed 30m. Greenwich mean time per chronometer 5h. 7m. 30s. Altitude, sun's LL 30° 49′ 0″, height of the eye above the sea 20 feet, (estimated lat. 49° 30′ 0″ N.)

22.—On 25th July, 1846, P.M. civil time at Grenada, when a chronometer showed 12h. 23m. 35s. the double altitude of the sun's LL by an artificial horizon, was 64° 30′ 00″, and on 7th August, 1845, P.M. civil time, when the same showed 12h. 22m. 40s., the double altitude of the sun's LL was 64° 30′ 00″; required the daily rate.

23.—On 5th August, 1846, at 4h. 45m. 34s. P.M., lat. 44° 0′ 0″ N., long. 10° 30′ 0″ W., the altitude of the sun's LL was 24° 48′ 0″, bearing E.S.E., height of the eye above the sea 20 feet; required the variation.

(To be continued.)

MIRAGE.—*Extract of a letter from Capt. Beechey, R.N., of H.M.S. Firefly, to the Hydrographer.*

June 11th, 1845, off Holyhead.

We had this day an opportunity of observing some curious effects of atmospheric refraction, which will I know be interesting to you.

The morning was calm; a fog had been on and off, and there was a peculiar brightness in the sky near the horizon. Every object appeared unusually small and sharply defined, so that a ship's main royal, the only part of her sails that was above the horizon, was reported as a buoy close to the ship. The smoke of steamers did not disperse, but lay in long dark ridges varying with the course of the vessel from which it had escaped.

Standing towards the coast of Ireland, a ship was seen in the distance under all sail; when we had neared her sufficiently to see her lower yards, her sails became elongated, and in a few minutes more her upper sails were greatly distorted, and she appeared to have four masts, one of which, no doubt, was her jib. (View A.) Soon afterwards her image was observed in an inverted position, but with this curious phenomenon of the hull, (which

was far below the natural horizon,) being fairly above water and well defined against the sky, whilst her upper sails down to the foot of her topsails were dipped below, so that all that part of the vessel that was *really above the horizon* and *ought to have been visible* was *hidden beneath* it; and that part of her which under ordinary circumstances *could not have been discerned* was now the *only part seen.* (View B.)

Several vessels near the ship were also seen inverted, and their hulls which were far beneath our horizon were also sharply defined against the sky; a brig also was seen inverted, but without any part of her sails being dipped as was the case with those in the ship. Other objects not before visible were now observed, and the Islands of Howth, Ireland's Eye, and Lambay, although by their distance and well-known heights were from 12 to 14 *miles beyond the distance* at which even their summits could be seen from our deck, were now fairly exposed to view against the sky even from their water line, but in inverted positions, (View F.) and angles measured to them exactly corresponded with their positions and limits on the chart.*

Still standing towards the ship we observed a second hull, with the lower parts of her sails erect upon the inverted hull. (View C.)

We were now obliged to increase our distance and as we receded the two hulls merged into one. (View D.) And on looking off for a few minutes and returning to the object the ship was seen erect as at first and nearly courses down, her jib and driver only being distorted by refraction. (View E.)

The temperature of the air was 67, of the water 51½, barometer 30·0—calm and overcast.

On the same day at Fleetwood a similarly remarkable inversion of objects was observed. Peil Castle and Walney Lighthouse, being seen both direct and inverted; the tops of the upper inverted objects being in contact with the upper parts of the lower ones were seen direct.

Loss of the Schooner Hero at Harwich.—In our January number (p. 45) we gave an account of the loss of the schooner Hero on Languard Point, from the columns of the *Essex Herald*, owing to the line of direction of Harwich Lights leading over that point. Great praise was due to Capt. Saxby and the crew of the *Scout* for their exertions in endeavouring to save the lives of the crew. We find by the same paper that during the regatta on the 1st of August, the Bishop of Norwich with a large party of visiters were on board the *Blazer*, when his lordship addressed the crew in highly laudatory terms on the gallantry they displayed on that occasion.

Capt. Washington then, turning to Mr. Saxby, said—"After the eloquent and impressive address you have just heard from his lordship it would be quite out of place that I should add another word; I will only say, then, that in the name of Archdeacon Berners, Sir Philip Broke, Mr. Attwood, M.P. for the borough, the Mayor of Harwich, a few sailors and other friends, I beg to offer you one of Dollond's best telescopes, and to your chief mate a Dollond's silver pocket compass, in testimony of respect and admiration for yourself and the crew of the *Scout*, for your humane exertions in endeavouring to save the lives of the crew of the Hero schooner, wrecked on Languard

* To enable you to test the accuracy of this, I subjoin the heights of the islands and the distances at which their summits would be in the horizon from our deck.

	Height. Feet.	Distant at the time.	Distance at which it can be seen.	Difference.
Lambay	418	37 miles	24 miles	13 miles.
Ireland's Eye	339	35 ditto	21½ ditto	13½ ditto.
Howth	563	34 ditto	27½ ditto	6½ ditto.

Beach, in an easterly gale and heavy snow storm, on the night of the 8th of December, 1844; and may you both live many years to make use of them in the profession to which you do so much credit. And now my men, not only of the *Scout*, but my shipmates of the Blazer, who have faithfully and creditably served your Queen and your country upwards of four years with me in the North Seas, I trust that what you have heard and seen this day will not be forgotten by you, but that it will be an encouragement to press forward in the cause of humanity, whenever an opportunity arises, assured that sooner or later your exertions will always bring their own reward.

THE "GREAT BRITAIN" STEAM-SHIP.—Liverpool, July 26.—This mammoth steam-ship has at length taken her departure for the western world. At twenty minutes past three o'clock she left her moorings in the Mersey amid the enthusiastic cheers of thousands of spectators who had assembled on the shores both of Cheshire and Lancashire, indepently of the hundreds who had embarked in various ferry-boats for the purpose of obtaining a more close and accurate view of her movements. On board was a large party of the merchants of the town, who accompanied the ship as far as the north-west light-ship, a distance of about sixteen miles from the port. The ship went majestically down the river. She had forty-five passengers, and had on freight about 360 tons of light goods, upon which £5 per ton was paid. The general opinion on board seemed to be that she would make the voyage to New York in about sixteen days.

NEW CHARTS.

Published by the Admiralty, and Sold by R. B. Bate, 21, Poultry.

WINCHELSEA TO BEACHY HEAD, *corrected to* 1844, *by Capt. Washington*, Price 2s. 6d.
BEAVER PORT, (*Africa W. Coast.*) *corrected by Capt. W. F. Owen*, Price 6d.
MOUTHS OF THE MAAS, *corrected to* 1841, *by Lieut. A. Van Rhyn*, Price 2s.
HIGHBORNE CUT, *by Com. Barnett*, 1835, Price 6d.

MONTHLY RECORD OF NAVAL MOVEMENTS.

Alfred, 50, Com. J. Purvis, July 26th, arr. at Spithead August 6th, paid off; *Agincourt*, 72, Capt. Johnstone, 19th May at Penang; *America*, 50, Capt. Hon. J. Gordon, 23rd May at San Blas; *Acorn*, 26, Com. E. Bingham, 18th April arr. at Buenos Ayres from Rio; *Actæon*, 16, Capt. Mansell, 24th May arr. Ascension; *Aigle*, 24, 20th August arr. at Spithead, 21st sailed for Chatham to pay off.

Bloodhound, st. v., commissioned at Plymouth by Lieut. R. Phillips; *Cambrian*, Capt. Chads, 29th July arr. at Portsmouth from India, 9th August paid off; *Cleopatra*, 26, Capt. Wyvill, 29th June sailed from Cape; *Conway*, 26, Capt. Kelly, 8th April left Mauritius for Seychelles; *Cormorant*, st. v., Com. T. Gordon, 20th May arr. at Callao from Panama.

Dædalus, 30, Capt. Mac Quhae, 19th May at Penang; *Daphne*, 18, Capt. Onslow, 17th May arr. at Arica; *Espoir*, 6, Com. Hands, 1st June arr. at St. Helena; *Eurydice*, 11th July arr. at Havana.

Ferret, 26th July arr. at Spithead from Africa, 28th sailed for Sheerness,

29th arrived; *Frolic*, 16, Com. C. B. Hamilton, 15th May left Buenos Ayres for Monte Video; *Fisguard*, 42, Capt. Duntze, 17th May arr. at Arica; *Grecian*, 16, Com. Montgomery, 5th June arr. at Rio from Devonport.

Hyacinth, 18, Com. Scott, 19th June arr. at Port Royal with freight from Carthagena, 21st sailed for Halifax; *Hecate*, Com. West, 29th June arr. at Madeira, sailed 30th for Africa; *Herald*, Capt. Kellet, 13th July arr. at Santa Cruz, 16th sailed; *Hibernia*, with flag of Vice-Admiral Sir W. Parker, 1st August arr. at Gibraltar.

Lily, 18, Com. Newton, 18th July, at St. Helena from Saldana Bay; *Modeste*, 18, Com. Baillie, 17th May arr. at Callao from Arica.

Pique, 36, Capt. Hon. M. Stopford, 23rd June arr. at Grenada; *Pandora*, Lieut. Wood, arr. at Tenerife 13th July, sailed 16th; *Pilot*, 16, left Bombay 28th May for Persian Gulf; *Persian*, 2nd July left Sacrificios.

Racer, 18, Com. Reed, 6th June left Rio for River Plate; *Rolla*, 13, Com. Simpson, 24th May arr. Sierra Leone from Plymouth.

Scout, 10, Com. Hon. L. R. Drummond, 27th July arr. at Spithead from Gibraltar; *Satellite*, 18, Com. Rowley, 20th May arr. at Buenos Ayres from Monte Video; *Sappho*, 16, Com. Hon. G. Hope, left Mozambique 15th May; *Styx*, st. v., arr. at Tenerife 3rd July. *Samarang*, sur. v., Capt. Sir E. Belcher, 9th April arr. at Hong Kong from Manila.

Thalia, 42, Capt. Hope, 23rd May at San Rlas; *Thunderbolt*, st. v., Com. Broke, left Table Bay for Mauritius 3rd May; *Vernon*, 50, Capt. Fitzgerald, 13th July sailed from Madeira; *Vestal*, 26, Capt. Talbot, 19th May at Penang.

Wolverine, 16, Com. Clifford, 13th May left Trincomalee for Penang; the *Warspite*, 50, Capt. Wallis, was at Beyrout on the 12th ult. A letter from her states she will be in England about November. The ship's company have purchased a large block of marble for the purpose of erecting a monument in Kingston (near Portsmouth) churchyard on their arrival in England, to the memory of their messmates recently drowned by the upsetting of the launch at Hassan-cove.

Admiral Sir Charles Rowley, bart., the Commander in Chief at Portsmouth, has struck his flag and proceeded on leave, and Rear Admiral Dacres has taken the command of the port during the gallant Admiral's temporary absence.—*Naval and Military Gazette.*

Promotions and Appointments.

(From the Naval and Military Gazette.)

Promotions.

Commanders—B Hains, H. R. Foote

Lieutenants—F. L. M'Clintock, W. Haswell, R. Buchanan.

Appointments.

Rear Admiral—Dacres to superintend Portsmouth dockyard during the absence of Rear Admi. Parker.

Captains—H. D. Chads, C.B., (1825), to *Excellent*, vice Sir T. Hastings, appointed Storekeeper of the Ordnance—*W. P. Stanley* (1838) to be Flag Captain to Rear Admi. Dacres.

Commanders—W. L. Sheringham to *Dasher*—R. F. Gambier (1837) to *Sappho*—H. M. Denham (1135) to *Avon*—J. P. Roepel (1841) to *Seaflower*.

Lieutenants—W. Read (1839), and H. L. Cox to *Dasher*—W. Deane (1843), M. H. Pearson to *Excellent*—T. Belgrave (1843) and C J. Walton to *Vindictive*—W. Thorp (1838), R. S. Hewlet and E. Holmes to *Calliope*—L. Brown to *Agincourt*—P. Nettleton to *Penelope*—C. Fegan to *Philomel*—W. Haswell to *Vernon*—G. Butler to *Meteor*—S. Lilburne to *Penelope*—E. Aplin to *Dædalus*

Masters—J. G. Thain to *Blossom*—J. S. Taylor to *Dasher*—J. T. Russel to President.

MATES—J. Edye to *Queen*—T. H. Molyneaux to study at Naval College.

SECOND MASTERS—R. W. Roberts to be Act. Master-Commander of *Fairy*—H. Norway to *Dasher*.

MASTER'S ASSISTANT—A Saunderson to *Dasher*.

MIDSHIPMEN—G. Shaw to *Rodney*—W. E. Chorlton to *Avon*—D. Slaughter to *Cyclops*—J. Bethesea and S. Twyford to *Victory*—R. Purvis to *Excellent*.

NAVAL CADETS—J. H. Chads to *Excellent*.

SURGEONS—J. Lardner (1838) in charge of the *Tasmania*, convict ship—J. Carmichael M.D, (1835) to the *Samuel Boddington*, convict ship.

ASSISTANT SURGEONS—W. Mc Mahon (1841) to *Dasher*—J. P. Lawrence (1843) to *Victory*—R. Galvin, (1841) J. Liffer to *Nautilus*—J. Peters to *Dee*.

CHAPLAIN AND NAVAL INSTRUCTOR—A. Brown to *Crocodile*.

PAYMASTER AND PURSER—W. B. Farron to *Siren*—J. M. Hope to *President*—Lieut. Clayton to *Rochester*—H. D. P. Cunningham (1842) to be Secretary to Rear-Adm. Dacres.

CLERKS—C. H. Elkins (1835) to *Dasher*—H. W. Rowlstone (1835) to *Volcano*.

The undermentioned passed for Lieutenants at the Naval College on Tuesday:—Mr. G. C. Lloyd, Mr. T. B. Hauham, Mr. S. S. Skipwith, *Excellent*.—Mr. T. A. Swinburne, late *Illustrious*—Mr. F. A. Foley, late *Cambrian*.

COAST GUARD.

Removals.—Lieut. W. A. Ferrar, R.N. to Cadgwith—Lieut. S. Morrish, R.N. to Kingsdown—Mr. W. H. Higden to Torcross—Lieut. J. Clayton, R.N. to Rochester—Mr. Quested to Epple Bay—Mr. R. Durnet to St. Marys—Lieut Goodridge to Paignton.

BIRTHS, MARRIAGES, AND DEATHS.

Births.

July 28, at Interlachen, Switzerland, the wife of Lieut. Hodgkinson, H.M.S. *Caledonia*, of a son.

July 27, at West Hamble, the lady of Capt. R. Russell, R.N. of a daughter.

July 29th, the lady of William Reymond de Montmorency, Esq., of Deptford Dockyard, of a daughter.

Marriages.

August 9, at Fulham, Lord Augustus Loftus to Emma, daughter of Capt. H. F. Greville, R.N., of Mulgrave House, Fulham.

August 13, at Brussels, Henry Cæzar Hawkins, Esq. Com. R.N., to Mary, youngest daughter of John Inman, Esq., of Acomb, Yorkshire.

August 14, at Richmond, Major James Whitcomb. R.M., to Maria, daughter of the late Capt. Henry Roberts, R.N., of Manor house, Marsh gate, Richmond.

Deaths.

August 7th, at Edinburgh. Rear-Adm. J. H. Tait, aged 74.

August 2, at Bath, Vice-Admiral G. J. Shirley, aged 77.

Retired Com. Samuel Mottley, aged 58.

At Litchfield, Lieut. Daniel Woodruffe, (1828,) after a long and painful illness, brought on while serving on the coast of Africa, in command of the *Alberi*, steam vessel.

Paymaster and Purser James Gregory, of the *Vestal*, and second master Thomas Walker of ditto.

July 23, at Sunderland, Lieut. W. Pinhorn, R.N., in his 48th year.

July 5th, at St. Omer, aged 52, Lieut. J. Bodill, of Her Majesty's service.

July 28, in London, Fanny Creed Ribouleau, the daughter, and on the 29th Mrs Ribouleau, the wife of Rear-Admiral Ribouleau.

July 28, at Bath, in her 77th year Mary, the second daughter of the late Rear-Admiral Brenton, and sister of the late Vice-Admiral Sir Jahleel Brenton, Bart., K.C.B., and of the late Capt. E. P. Brenton, R.N.

At Truro, Com. W. S. Oliver, on the retired list of 1816, at the advanced age of 71.

July 30, at Pembroke Square, Kensington, Mrs. Elizabeth Spence, in her 58th year, relict of Capt. H. H. Spence, R.N.

At Dundee, Com. A. C. Duncan (1837) late Inspecting-Commander of the Coast Guard at Ballycastle.

August 10, at Blackheath Park, Mary Jane, relict of the late Capt. Sharp, R.N.

August 11, at Greenwich, Lieut. W. Bowers, R.N., aged 60.

GALVANIZED IRON.—In our last number we briefly adverted to this very important invention, and a few only of the numerous purposes to which it is applicable. We find it has already been used as roofing in Deptford Dockyard, and that it is also in course of application to the same purpose in Portsmouth and Woolwich Dockyards.

METEOROLOGICAL REGISTER.

Kept at Croom's Hill, Greenwich, by Mr. W. Rogerson, of the Royal Observatory. From the 21st July to the 20th August, 1845.

Month Day.	Week Day.	Barometer.		Fahrenheit Thermometer, In the Shade.				Wind. Quarter.		Wind. Strength		Weather.	
		9 A.M.	3 P.M.	9 A.M.	3 P.M.	Min	Max	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.
		In Dec	In Dec.	°	°	°	°						
21	M.	29·95	29·95	63	73	54	74	NE	NE	2	2	or (1)	bc
22	Tu.	29·95	29·93	65	73	62	74	SE	SE	2	3	bc	bcm
23	W.	29·92	29·92	66	67	55	68	NE	N	2	3	or 1) (2	od 3)
24	Th.	29·93	29·94	57	61	53	62	NE	NE	2	2	o	o
25	F.	29·96	29·95	60	68	52	70	E	S	1	1	o	o
26	S.	29·93	29·91	63	68	58	71	SE	SW	1	2	o	bc
27	Su.	29·89	29·87	65	69	55	70	SW	SW	4	5	o	qbc 4)
28	M.	29·78	29·70	58	64	54	68	SW	S	3	3	op 2)	op 3
29	Tu.	29·59	29·70	58	62	48	64	NW	NW	3	4	bc m	bcm
30	W.	29·82	29·76	57	59	46	62	SW	SW	4	4	bc	or (3 4
31	Th.	29·60	29·60	54	63	44	64	SW	SW	3	6	bcp (2)	qbc
1	F.	29·70	29·70	60	66	51	67	SW	SW	5	4	jbc	bc
2	S.	29·45	29·39	51	63	52	66	SE	SW	2	4	or (2)	otlr 3) 4
3	Su.	29·68	29·72	60	66	48	68	SW	SW	4	4	bcp 2)	bc
4	M.	29·86	29·88	64	68	53	69	SW	SW	5	4	qbc	bc
5	Tu.	29·67	29·67	65	71	55	72	SE	S	1	3	bcp 2)	bc
6	W.	29·85	29·89	63	69	56	70	NW	SW	4	2	bc	bctp 3)
7	Th.	29·78	29·80	61	58	51	65	W	NW	5	3	qbc	bctp (3)
8	F.	29·88	29·88	59	67	48	68	NW	W	2	4	bc	bc
9	S.	29·65	29·47	61	64	55	65	SW	W	5	7	qar (1) (2)	qbc
10	Su.	29·56	29·59	57	59	52	60	W	SW	6	4	qo	op 3)
11	M.	29·66	29·70	60	66	53	69	W	W	4	2	bcp 2)	bcptl (3)
12	Tu.	29·89	29·97	59	61	53	63	NW	NW	4	2	o	o
13	W.	30·07	30·09	52	60	51	61	NE	NW	1	1	or (2	or (4
14	Th.	29·99	29·93	56	59	50	60	NW	NW	1	1	o	o
15	F.	29·76	29·78	56	58	52	59	NW	N	3	5	o	qbcp (3
16	S.	29·86	29·92	54	56	46	59	N	NW	5	3	qbc	o
17	Su.	29·88	29·84	56	60	46	62	SW	SW	2	2	o	bc
18	M.	29·82	29·76	60	68	47	69	SW	S	3	1	o	bcr 4)
19	T.	29·31	29·15	59	62	52	63	S	NW	1	5	or (1) (2)	qor (3
20	W	29·37	29·67	56	62	48	64	W	W	6	6	qbc	qbc

JULY—Mean height of the Barometer—29·921 inches; Mean temperature = 61·9 degrees; depth of rain fallen 2·04 inches.

TO OUR FRIENDS AND CORRESPONDENTS.

Any information on the subject of *Seamens' Homes* from any of our readers will be thankfully received, as we are desirous of promoting these establishments, and informing them where they are to be found. This important subject has occupied so much of our present number as to oblige us to reserve the account of the *Meeting of the two winds*, "*Nautical Rambles*," the account of the "*Felicidade*," and notices of New Books.

MR. GROOM has our best thanks for rescuing the bottle paper from such bad hands. Also Mr. DORSETT for his attention.

HUNT, Printer, 3, New Church Street, Edgware Road.

The Raven Islands.*

Extract from the Log Book of the Barque Clarinda, E. P. Godby, from Van Diemen Land towards Manila, China, &c.

Remarks.—Monday, February 15th, 1841.—"At 1 P.M. bore away west to avoid the supposed danger of the Raven Islands, the same not being alluded to in Horsburgh's Directory. Strong breezes; all possible sail set. Employed fitting and fixing temporary waistcloths, &c. At 4h. 45m. long. chron. 158° 22′ 30″ E., var. per azm. 9° 32′ E.; strong breeze from E.N.E., and fine. Midnight, hauled up a point. At 2 P.M. hauled up a point. At 4 hauled up a point. At sunrise made the islands, bearing from N.b.E. to N. ¼ W. At 6h. 45m. made another island, bearing N.W., kept away to leeward of the same; Long. chron. 156° 53′ E., var. per azm. 11° 0′ E.

Long. ☉ ☾ 157° 13′ E., and by observation at noon I make the said islands 30′ of long. to westward of the position assigned by *Norie*,† and from 7′ to 10′ of lat. to the northward of him. At noon the islands bore S. 68° E. by compass about ten miles.

Course N. 70° W., dist. 150m., d. lat. 51m., dep. 141m., lat. acct. 6° 9′ N.
lat. obs. 5° 56′ N.

Diff. long. acct. 2° 21′. ‡ Long. by acct. 159° 8′ E. ¶ Mean var. 10° 16′ E.
„ „ chron. 1° 44′. „ chron. 156° 38′ E. Bar. 29·85. Ther. 86°.
☉ ☾ 156° 56′ E.

"In bearing away so as to pass about 1½ miles to leeward of the island last made, it was seen that nearly all the *seven* islands were connected by a reef, on which the sea broke heavily; the last island alluded to had a most beautiful appearance, about two miles in length from east to west; the sandy beach being thickly lined by cocoa-nut trees, very beautifully variegated back foliage in some places, but not the least appearance of inhabitants.

"About 8h. 45m. A.M., when steering so as to pass without landing, a catamaran with a well cut Spanish lateen sail was observed making towards us from the easternmost end of the island, and observing that she contained only four persons was induced to back the main yard, more particularly, as at the same time observed directly over the catamaran,

* In our July number (p. 421) we inserted some remarks of an officer of the *Vestal* on the Raven Islands, and in our number for August (p. 421,) we also inserted a notice, which had been very properly sent to us by Mr. Godby, cautioning merchant ships against being off their guard in accidentally visiting those islands. There is no doubt that the islanders which visited H. M. S. *Vestal* might have conducted themselves very differently towards a merchant vessel, in comparison with their behaviour on the quarter-deck of a man of-war, more especially had they succeeded in getting the merchantman into their power. However, the facts are now before our readers, and the extract from Mr. Godby's letter will throw some additional information on the islands and their inhabitants. But what the wreck was, and how she came there does not appear. Perhaps some of our readers may hereafter throw some further light on her and these islanders, in the pages of the *Nautical*.

† *Norie*, London Edition, 1839.
Raven or Patient's Island, Lat. 5° 40′ N. Long. 157° 40′ E.

‡ *Long. by account*, or dead reckoning, *brought on* from the ship's last well determined position.

¶ *Mean variation*, not corrected for *local attraction*, which on board the Clarinda was considerable, but never *mathematically demonstrated*.

what appeared to be a vessel dismasted, on the other side of a neck of land. We had no sooner backed the main yard than we discovered others attempting to cut us off from the *west end* of the island, coming round *outside and to windward* of the reef at that end; which induced us to fill and stand on, but was immediately hailed by the first, in good English, which induced us to back a second time. Finding she would not come alongside until another catamaran, with an English-cut lug sail, and which it was said contained a white man, could come up, we filled a second time. The two then passed each other within hail, and afterwards the last mentioned hung out some signal, and appearing very anxious to speak, we backed a third time, the others having all turned towards the shore.

"At 10 A.M., suffered the white man to board us, being prepared with our small arms, &c.; he was very anxious for us to return, in order, as he said, to supply us with hogs, &c., but from his prevarication, incoherent, and extraordinary statements respecting the islands, we deemed it most prudent to make the best of our way on our course.

"Amongst other statements he made was, that *two* captains of ships had been murdered at the island, in revenge for which he was of the party who took the island from the natives; that they slew all the men, but spared the women, about forty of them and some boys; that the first man who hailed us in the first boat was an American black, who had been all his life in the English service, (by-the-by, that fellow said it was a Spanish island,) and had been cook of the vessel; that *he* had brought off women in his (the black's) boat, because *he* had no men; whereas he (John Marvin, from Whitehaven, Scotland,) had brought off his own men, two or three of whom discovered themselves as women, to some of the crew; they also wearing very neatly, or rather classically, made garlands of flowers on their heads, and a sort of Scotch kilt made from the [illegible] the cocoa-nut tree. It was ascertained too that he had a [illegible] in his catamaran, and solicited to be allowed to 'give us round;' a bottle of which was allowed to be handed up. It was of his own distilling, and from a still made from a copper given him by the captain of the ship; that nothing in the island, that they had lots of things useful and for [illegible] there; he had the morning previously discovered a spade [illegible] more had been murdered and buried; that H.M.S. [illegible] been there about fourteen months since, had promised to re- [illegible] months, but had not done so; that he had a character [illegible] murder. On parting he complimented the crew on their [illegible] and expressed a wish to have them on the island.

[illegible] fifty years old, 5 ft. 6 in., large grey beard, and the [illegible] double the size of the other; he begged only a couple [illegible], and a little tobacco, with which he departed, wishing [illegible] passage, &c., and wishing to be reported to any ships as [illegible] to supply them with hogs. A more dangerous, sagacious- [illegible] character in appearance, I think I never saw; he confessed [illegible] left his own country for smuggling, and intended to leave [illegible] the island."

A [illegible] Journal in [illegible]

E. P. Gennys.

[illegible] 1845.

Hall of Commerce, Threadneedle Street,
4th August, 1845.

SIR.—In passing close to leeward of the island, so perfectly beautiful in appearance as it is, independent of other circumstances, the temptation to land was very great, and it was not until it must have been quite evident to the persons on shore that we had no intention to land that the first catamaran made her appearance.

While the first man was dallying with us, for he declined to come alongside, the second made his appearance from somewhere near the middle of the island. In the meantime my attention was directed by the helmsman to what appeared to him as bodies moving amongst the rocks and breakers; but which were canoes or catamarans, evidently *cutting us off* from the weather side of the point and breakers, and, though not easily distinguishable, might have been alongside nearly as soon as the second catamaram. Our suspicions having been excited from the first appearance and *manœuvre* of the first man, we were upon the alert and *filled*, until we perceived that all were returning to the island except the one we permitted to board us, and who had continued to hold out *a hat on a stick* as a signal. On his first coming alongside, *Macvie* denied, more than once or twice, having anything whatever to dispose of, or to barter, and it required a rather close scrutiny to discover the vessel in which he had the spirits concealed and carefully covered with a mat under the sail, but of which he afterwards admitted he had "*plenty to give the crew—two or three glasses round;*" one bottle only I allowed to be hauled up, and brought it home as a curiosity. On finding that I was firmly resolved not to land a boat, he evinced by his language and manners a disposition rather to inflame and incite the crew to resist my authority, than to render useful information. On my intimating to him that probably he would like to join the ship, he seemed better prepared for a leap overboard, so as to be picked up by the catermaran, in which I had observed a tomahawk with a newly fitted handle.

The natives who came alongside were remarkably good looking; after being discovered as women by some of our crew, evidently with the intention to decoy them on shore, and if they had succeeded in smuggling the spirits on board, it is impossible to say what mischief might have ensued; at any rate, no doubt has ever existed in my mind as to their evil intentions.

I am, &c., E. P. GODBY.

To the Editor, &c.

VOYAGE OF THE ALBATROSS.—(*Royal Yacht Squadron.*)—*From Van Diemen Land to Cowes, by Cape Horn.*—1845.

(Concluded from p. 454.)

BESIDES the mortification of being driven from our port was the early separation from our American friends, as we intended in our route northward to have spread the four vessels for sighting Haig's Island, *laid down on the charts* doubtful, but of its actual existence I have not

the least doubt. We passed this island in the Sir John Rae Reid, about four or five miles under its lee; its summit was supposed by all hands to be about 800 feet; it is probable two miles or more in length, with a reef running from its northern extremity; birds were very numerous, and had been several hours; no discolouring of water was noticed, nor soundings thought of. Our track was now more inshore of it, but in lat. 44° 34′ S., long. by chron. 49° 48′ W., we had strong gales north, with heavy confused sea, such as experienced in tide rips. Bar. 30·38 to 34. Ther. 66. Water 64. Midnight—large flocks of birds, chiefly the snow and stormy petrel, and many thousand fish in all direction for miles. Our observations at noon gave us fifty-six miles of northing, and chron. at 4 P.M. gave us eighty-two miles easting more than account, so that we had a strong current going to windward; atmosphere warm and damp, with a penetrating dew, which was not to be expected in this southern clime with the sun going to the northward.

Daylight of March 9th brought us alongside another worthy American, the whaleship Henry, of Sag Harbor, Capt. Browne, from whom we received a visit and a supply of water, and as we had selected the island of St. Catherine as our recruiting place, he favoured us with a chart of the coast from Cape Frio to River Plate, published by E. and G. W. Blunt, of New York.

At 3h. P.M., March 20th, in lat. 29° 36′ S., long. 47° 44′ W., observed an increase in the easterly swell, but no discolouring of water; sounded 65 fathoms, fragments of rock, stone, shell, and mud. 5h. P.M., saw the land, Cape Santa Maria Grande. 4 A.M., tacked and sounded in 21 fathoms, mud and stone. 8 A.M., light airs with intervals of calm, sounded in 25 fathoms, same bottom, current W.S.W. two knots, and this current of W.S.W. eighteen miles per day we had experienced since we arrived in 37° S. 47° 24′ W. In working alongshore from Cape St. Maria Grande to St. Catherine the same current was observed, with a heavy everlasting swell rolling in upon the coast.

The chart above mentioned coming from the hands of a great publisher, and being very nicely delineated, induced us to place great confidence in it, yet it sadly disagreed with our chronometer, in the cross bearings taken of the land. At our landfall, Cape St. Maria Grande, it led us to conclude that our chronometer was twenty miles westward, and next day in working along the land we were nearly as much to the eastward.

In determining our position by bearings necessary to be taken at sundown, we were directly abreast of an opening between two islands, the Ilha das Araras, west two miles, Isle Tocorami in one with Isle das Sobas de la Laguna, S.W., did not agree with the chart, and a double peak rock or islet N.N.W., three miles, a high sugar-loaf rock N.N.E., and another rock or islet N. ½ E. were none of them laid down upon the chart.

22nd, very thick weather, winds light and variable, sounded occasionally, ends with fresh gales south, sun obscure. At 2h. P.M. hauled in and sighted south entrance of St. Catherine, which appeared very confined; stood out, passed inshore off the three Irmans, carrying eight fathoms, sandy bottom. This passage is less than a mile wide, but the coast is bold and clear. 5 P.M., strong gales south, with heavy rain;

bar. 30·15, ther. 76 ; stood off shore under close reefed trysail and stem jib. Midnight, moderate and clear, stood inshore. 4 A.M., made sail and ran along the land at the distance of two to three miles, steering generally N.W.b.N.

On the chart which we held before us we were looking, as we sailed on, for about twelve miles of nearly a straight line of coast, forming the north part of the island, running north and south, but our course by compass differed three points from the representation, and the appearance bore not the slightest affinity—being indented in place of even, and as we had no sun the day preceding, our position was rather doubtful.

The next matter of perplexity was in looking as we went on for two islands shown on the chart, two miles S.E. of Island Arvoredo, and called Swan Islands, with a rock about half a mile S.E. of Arvoredo, but they do not exist. Passed Arvoredo with light airs ; lat. at noon fixed our position and cleared all doubts ; took several bearings of the land, and of the Islands Gall and Arvoredo, but none of them agreed with the chart, and two rocks W.N.W. of Arvoredo, bold and well out of water were not marked on it. Working in during the night with light land wind. At 11 A.M., the sea breeze enabled us to steer for the entrance S.W.b.W., as per directions of French navigator given in page 226 Ethiopic Directory, passing Fort Santa Cruz in four fathoms, mud ; hove to for the boarding officer, a kind of military looking gentleman, accompanied by a custom-house officer. Neither of them spoke English nor could they understand the nature of the vessel, for although I pointed out our track on the chart from Van Diemen Land round the Horn, the inquiry was still the same, " Coast Africa, contraban to Negro," so that it appears we were taken for a slaver.

The custom-house officer left on board tendered his services as pilot, presenting good recommendations from two or three English vessels he had conducted, but as we had not wholly condemned the American chart, which exhibited three to five fathoms throughout the gullet, and with the directions of M. Barral, the French surveyor, his offer was not accepted. Ethiopic Directory, page 226, tells us from French authority " When you bring the Little or Southern Raton to bear E. ½ N. (East) at two miles off, change the course to S.E. and continue it thus for three miles." We steered S.E. when the island bore as directed, but before we had proceeded one mile the custom officer (whose services we had previously declined) took the helm, and hauled to the southward, and although he did not succeed in running us into more water, he prevented us going into less, which we should have done by following the directions.

Our course through the gullet was S.S.E. and S.b.E., the entrance of the narrows bearing S.E.b.S. At about two miles from the narrows the soundings increased gradually to five fathoms ; carried same depth through to anchorage half a mile off the city ; anchored with the narrows open in five fathoms, about half a mile off the city Nossa Senhora do Desterro. The grandeur of this little place must be wholly in the name, there is none in its appearance or reality. After the customary visit of the boarding officer, (a worthy old Portuguese, who had served in the British Navy last war,) accompanied by Mr. Otter, the only English

merchant of the place, I waited on the President, General Antonio Jose Ferrera De Britto, a very fine-looking middle-aged gentleman, who received us with the greatest politeness and civility—a better reception it was impossible to have. His Excellency was perfectly sensible of the character of our vessel, having seen one of the Royal Yacht Squadron at Rio Janeiro, probably the *Royalist*, or the *Wanderer*, or else our own vessel on her outward passage.

The residence of his Excellency was rather a spacious and substantial building, void of decorations or anything costly or showy. The entrance went directly into the public street or square, and was guarded with a corporal and two privates, not too clean or respectable in appearance.

My next attendance was to the residence of the Inspector of Customs, a civil good little gentleman, but, like all the rest of the inhabitants, could not understand the nature of a yacht, nor how any gentleman could send his vessel round the world upon pleasure.

The report was now prevalent that England was going to war with Brazils, and we were sent a spy into St. Catherine's, having hauled forty of our crew in one of the bays outside. A group of youngsters, as I turned the end of a street, hailed me with "Capitan, contraban the Negro," and made off like good fellows, shouting the same as they went.

Next day we received a visit from the Inspector of Customs, for the purpose of seeing more into the nature of the vessel; he was soon sensible that we had nothing to do with commerce, and accordingly removed the custom-house officer. He was perfectly delighted with the vessel, and with the fare set before him—bread and cheese, and porter, with a glass of wine, all we had to offer, or had ourselves for the last five or six days, being close hauled upon wood and water.

To day we heard the unpleasant news that a small schooner of 25 or 30 tons we had passed off Laguna a few days previous, had foolishly taken us for a pirate, run on shore and was totally wrecked, and was all the property of the owner on board.

On the 22nd, at noon, saw a small schooner inshore, running along the land, hoisted the red ensign, and when about a mile from her, she [illegible] on our lee bow, we tacked, being about two miles from the land, [illegible] off shore until sun-down, and while the said schooner remained in [illegible] she continued her course along the coast as far as we could [illegible]. So that how to account for her running on shore while we [illegible] sailing away from her, is something too strange to do.

[illegible] day during our stay brought its report;—at one, we were a [illegible] then, that we were looking after slavers; and then we were a pirate, or anything but what we really were—a yacht was not [illegible] understood.

[illegible]est thing I saw in the city was a sergeant of the "National [illegible] a very consequential-looking personage, about five feet six [illegible] height, as many in the round, covered with buttons and [illegible] and a pair of spurs the size of two dollars, lashed round his [illegible] three parts of a stout iron chain, large enough to hold a good [illegible]. If I could have spoken Portuguese, I should have asked the [illegible] if he was not afraid of his head lashings giving way.

[illegible]owing the following questions were put to me in a very serious [illegible] that I should take a slaver in the event of meeting one on-

side? And whether it would not weaken our crew very much if it consisted of only ten hands by sending a boat on board of her? Inconsistent as these inquiries appeared, I was not much surprised from the many nonsensical reports I had heard, but assured the gentleman it was not at all likely that we should meet with such a thing, and as to dividing a small crew, was what I should never think of doing, by sending a boat away; but should anything of the kind turn up, said I, (and he looked truly anxious,) I should keep up a constant fire of small stuff towards the helm and companion, until they sent their boat on board of us. This brought forth a shrug of the shoulders, and cut the conversation.

Our stay here was unexpectedly and unpleasantly prolonged nine days; we did not find it anything like its glowing description of the French and Russian navigators. The capital is but a poor mean-looking place of no extent, and, as near as I could learn, the amount of inhabitants on the island, and its opposite shore, might be estimated at about 6,000 or 7,000. And even this little number it is difficult for a stranger to make out how they live, respectable as they appear, and commerce being upon so very small a scale. Yet in the custom-house (a mean-looking room, almost productive of melancholy,) I observed no less than twenty-three sitters round desks and tables, all smart and respectable, and full of business, yet there were but nine or ten vessels in the harbour of any tonnage, with as many small craft.

The enormous sum exacted as anchorage in this port must be ever detrimental to commerce and to the interest of the place, as I understood the charge for a vessel of our draught (11 feet) would have been 72 dollars. Anchorage, however, was not charged us; had it been, I should have gone to sea without paying it, or even as many shillings; our expenses with the custom-house, including hospital money, amounted to about twenty-six shillings.

The limited circumstances of the place do not, however, diminish the merits of the country, which is everywhere beautiful, and the soil extremely fertile. The atmosphere during our stay (the rainy season) was warm and damp, or rather like hot and moist;—ther. from 82° to 86° in the shade.

At our anchorage off the town with the narrows open, the ebb set past the vessel to the south two knots, flood to the north one and a quarter; the rise and fall is very trifling—four feet. On leaving, we worked through the narrows carrying three to five fathoms. At anchor for the night, east point of narrows S. $\frac{3}{4}$ E., west point of narrows S. $\frac{1}{4}$ E.; a reef N.E. $\frac{1}{2}$ N., and the opening between the Raton Islands N. $\frac{1}{2}$ W.; here we had 11 feet 6 inches at half tide. In the morning we weighed and with light winds worked over the flats which extend to the Raton, depth of water was just sufficient—11 feet, with very soft mud. When centre of North Raton bore N.E.b.E. $\frac{1}{2}$ E. the eastern extremity of Isle Anhatomirim N.b.E. $\frac{1}{2}$ E., the soundings increased to quarter-less three fathoms. From this spot two ships at anchor towards the village St. Miguel bore S.W.b.W. $\frac{1}{2}$ W., depth of water in the space between us and the shore twelve feet by information of the pilot who conducted them there.

At 5 P.M. anchored within Fort Santa Cruz; the bearings taken were

[redacted] [redacted] [redacted] [

It will be remembered that we have travelled several thousand miles under our trysail, at two and sometimes three knots, when we could have carried whole mainsail and topsail, at eight knots; loss of main jib produced a long passage.

J. M. GILL.

NAUTICAL RAMBLES,—THE LEEWARD STATION DURING THE WAR.

Port Royal and its Associations.

(Continued from p. 411.)

CAPTAIN COOK seems to have considered the subject as not beneath his notice; and Captain FitzRoy, and, indeed, other navigators have mentioned it; but where there are clusters of islands in almost every direction, as in the Great Ocean, little dependance can be placed in the "sign," as the old pilot called the flight of the birds. But in a particular portion of the sea, circumscribed as that is, of which we are speaking, and where there are opposite currents in close vicinage, it may become useful, even to the skilful navigator, as it assuredly must be to those who are not, and here may be safely relied on, for the instinct of nature is rarely found deviating, as it necessarily creates a habit that becomes as regular as the motion of the sun, which, in fact, would appear to be, jointly with the calls of hunger and rest, the regulator of that habit.

Let the seaman not despise such apparently common-place circumstances, or exclaim "What have we to do with the flight of birds," for we tell him that he will find it conducive to *his* happiness, if not to his interest, to encourage the spirit of observation which belongs to his nature. Besides the rationality of the employment, examples of men rising to eminence from following it with diligence are common. Indeed, the engagement of the mind in the pursuit even of a seemingly trivial study of this sort, will assuredly bring its own reward. But, at all events, it is far better than indulging the "yawn of ennui," or striding the deck without a single thought worth pursuing or preserving.

I have shown that Dame Fortune had throughout our Nautical Ramble along the coast of the Spanish Main, acted in a manner which it was impossible for us to complain of. That we did not profit by her favours, may be laid down to untoward "opinion," rather than to any whim of hers. I may be permitted (I trust without seeming to obtrude too much of my own personal adventure upon the reader's patience) to state here a freak which the blind goddess played off upon me; and I do so the more readily as the occurrence was not a very common one.

An English gentleman happened to come on board the brig, whilst she lay at St. Andrés, to pay his respects to the Captain. Whilst they were walking the deck, the latter called me by name to perform some duty. The gentleman quickly asked me if Toggle was my name hereditarily. On my replying in the affirmative, certainly with no small degree of surprise, he said "Then I am sorry to tell you that you *have come to St. Andrés* a few days too late to succeed to a fortune!"

"Indeed! that is extraordinary, for I am an entire stranger here." "No doubt; but it is a fact nevertheless." The Captain now became a little interested, and requested the gentleman to explain the matter, adding "We appear this cruise to have been the sport of fortune." I think the gent's name was Taylor; he replied: "Why, it is a curious circumstance, although I believe not unprecedented. The case is this: an old Briton by the name of Toggle, having resided many years in the island, and accumulated an independent property, died a short time since, leaving me his executor. He told me, when about to make his will, that he had not a single relative alive to whom he could leave his property; and, as he was extremely unwilling that the Spaniards should succeed to it, he had resolved that the first person whose real name was the same as his own, that came to the island after his death, should inherit it; and he requested that I would see this, his last wish, punctually performed, leaving a legacy to myself for the due performance. I had been diligent in my inquiries, for two years, on board the different vessels that arrived here, for a person of his name, but without avail until a few days preceding your appearance, when a Force Trader anchored. Among her crew was a lad, about sixteen years of age, whose name was Toggle, and satisfying myself it was not an assumed one, I handed over to the lucky youth the property left in so strange a way." The Captain observed that it was altogether a very remarkable circumstance, and that I was not born under a lucky planet!* If there be any truth in the Astrologer's art, then the Captain's assertion may be correct, for it subsequently happened that I missed a princely fortune by the "turn of a straw," besides losing two others, principally because I preferred to serve the country instead of attending to my own affairs;—but these tales do not belong to our cruise.

With respect to old Mr. Toggle's bequest, it did not prove a "sour grape" to me, as the fruit did to the fox in the fable; indeed, if I had been inclined to take it to heart, the following lines written by a "salt-water" bard, on the occasion, would have instantly corrected the feeling:

> "Ah! grieve not, feel not that thou hast miss'd
> The clutch of golden treasure in thy 'fist;'
> Grieve not, Toggle! thou can ne'er be unbless'd
> For pelf thy empty pocket ne'er possess'd—
> Content thee, lad—for he who hath content
> Is bless'd, far, far beyond the craver's bent."—*The Ship's Muse.*

Apart from adventitious "luck," perhaps, in the various fortunes of men during their career through life—all striving, with an energy far surpassing any other inclination, to obtain that condition which shall place them above want, and insure ease and comfort during declining

* This observation of the Captain reminds me of the lines of Lord Byron:

> "Ye stars! which are the poetry of heaven!
> If in your bright leaves we would read the fate
> Of men and empires—'tis to be forgiven,
> That in our aspirations to be great,
> Our destinies o'er leap their mortal state,
> And claim a kindred with you; for ye are
> A beauty and a mystery, and create
> In us such love and reverence from afar,
> That fortune, fame, power, life, have named themselves a star."

age—there are no means adopted for its realization which oftener entail on the strivers more certain disappointment than the "lottery" of a naval life.

To be convinced of this, we have only to look around us at the *hundreds* of gallant beings attached to that service, who have grown grey in their struggle for advancement, and are lingering out the few remaining years it shall please the Almighty disposer of events to grant them, in "honourable poverty."

But, let us turn from this picture, (melancholy in contemplation, because the objects deserved a better fate, and for which there seems to be no hope of remedy*), to one wherein a display of that quality, which has given a never fading fame to the country's name, may be viewed with more complacency though the event was not successful.

Before we finally quitted St. Andrés, our young Captain was seriously attacked with fever, and was in some danger for several days, but happily rallied, and was finally restored to us—a satisfaction which was felt by all on board, for he was much beloved, not only from his mild rule, but from his kindness of heart, liveliness of disposition, and the entire absence of that *hauteur* of deportment which I have seen assumed by officers very much his inferior in every respect.

One fine morning in the fall of the year, we stood in towards the cays and islets of San Bernardo, to the southward of Carthagena. They differ from those of St. Rosario in being smaller, and all are bushy.

* I have here merely stated a fact, and have no desire to be understood as intending to use the language of complaint. I have long meditated drawing up a paper respecting the appropriation of a portion of the prize money made during a war, as an accumulating fund, whilst it continued, to be applied in peace to the necessities of the officers, according to the discretion of the Lords of the Admiralty, entirely free from political bias, or from private interest.

Supposing that during the twenty years the late war continued, half, or even a fourth, of the entire prize money had been placed—as deducted—out at compound interest, what a relief such a fund would have afforded to the officers without a fortune, during the twenty-five years of peace which have passed!

The amount of money distributed as "Out Pensions" from Greenwich, is so trifling, compared with the number of individuals requiring pecuniary aid, that the good done falls very far short of the desire of the authorities to afford relief; and the country, unhappily, is not in a condition to do more at present. There appears to be, judging from the institutions which have risen up lately, such a disposition in all grades to ameliorate the pressing necessities of all classes in the service, that it may be taken for granted no opposition would, at a future time, be made to the appropriation of a portion of the general prize money.

Indeed, had it been put in force from the first breaking out of the revolutionary war, it is probable that the amount would have been so great as to have altogether superseded the necessity for any additional aid from the Government; and the officers would thus have been rendered independent, in some degree, of their country's gratuity, and relieved it from a portion of that burden which has been—not very complimentally—styled "the dead weight."

Such intense disgust has this expression created in the minds of naval men, that I have repeatedly heard officers declare a wish that fortune would place it in their power to give up altogether the remunerating allowance of their grateful country.

We sincerely hope that in any future war, this reasonable plan will be considered worthy of adoption.

Between these cays and the main shore, there is a channel with various depths of water, and in our day, but little known among men-of-war's men, except for the hard knocks they occasionally get from the Spaniard's balls. As much care was required in the navigation, our old thirsty friend, Log, brushed up his energies, and, for the time, displayed a good deal of activity, for he was not very minutely acquainted with the soundings hereabout—it was no wonder, therefore, that he kept his eyes cautiously bent upon the colour of the water, and his ear "cocked," so as not to miss the articulation of the lead's-man's sonorous voice. We poked the brig's bow into the secret recesses, as we went on, just as near as the depth of water would allow—now bearing away, now hauling up, but as yet without seeing even a canoe; but "opinion" was strong that we should here meet with adventure, and it would be a hard lot indeed, after our many disappointments, if we did not close our cruise with *eclât*, and pay the saucy Dons for the thrashings they had given to some of our predecessors. At last, the mast-head-man reported a *flotilla* standing along shore, and towards us. "A flotilla! Huzza! just the thing; and now for a slap at the haughty Dons."

(To be continued.)

Notice of the City and Commerce of Shanghai.

(Concluded from p. 487.)

Manufactures.—Finally, English goods are occasionally to be found in bond at Manila which might be brought with advantage. But these would be accidental cases on which one cannot count, as we have English houses established here and are so near the free-ports of Singapore and Hong Kong. The same thing may be said of opium. With respect to our own manufactures, I feel excused for observing that if neither in the Philippines nor in Spain itself can we compete in cheapness with strangers, still less can we do so in Shanghai. There was a time in which we possessed great advantages for woollen cloths; but now those of New Holland and especially of Germany have made the Spanish fall into comparative insignificance. Besides woollens are in little request among the Chinese, who prefer cotton clothing; and Russian cloths are sold at Shanghai at equal, or even lower prices than the German, for this sufficient reason, that the barter for tea at Kiachta enables the Russians to supply them at the lowest rate. The re-establishment of peace, however, and the improvement of machinery in the Peninsula may change the aspect of affairs in this respect.

Exports.

Wheat.—Can be bought when there is no scarcity at 1½ dollars per pecul of 100 catties, and it would be very convenient to introduce it into the Philippines. It is very easy to show that a given space of ground in these islands planted with sugar or indigo would yield a produce sufficient to buy at the price mentioned at least two or three times more wheat than the said space could produce. Flour would be *equally* a branch of export. In favourable seasons it can be bought at *from 2 to 2½* dollars.

Silks.—For the superior textures of silk of every kind, it has been already shown that this is a better market than Canton, and consequently it is better adapted for those who wish to undertake voyages to America. Also every kind of sewing silk is to be had here at lower prices; and unmanufactured for weaving with colours prepared in Hanchew and Nankin, much of which is used in the Philippines. Now the shawls made in Canton for the European market are not embroidered, but persons abound who can expend an equal amount of labour at the same or a lower price than there. The crapes manufactured in this neighbourhood are very superior to what are commonly seen in Canton, and although they weave it very narrow I have been assured they would make it as wide as might be desired. Also they will weave here, if patterns are given them, white and coloured handkerchiefs, plain or figured, equal or superior to those exported from Canton, and ribbons of all classes.

Nankin.—The yellow cotton cloth known in Europe under this name, and in Spain called *Makon*, can be bought here lower than in any other part of China, and also the white sort called Nankin white. One hundred pieces of the former of 21½ *chi* of Shanghai are worth 40 dollars.

Tea.—The green tea will be bought here 18 or 20 per cent. lower than in Canton, and may be conveyed to the Philippines for local consumption, for Spain, or to be sent to America, particularly to Havannah, whither it will probably be sent in large quantities to be introduced into the republics in a contraband form.

Rhubarb.—Comes from the province of Suchuen and will be obtained at Shanghai at least as cheap as in Canton.

Earthenware.—In the cities of Chanchew and Nihien betwen Suchan and Nankin are manufactured waterjars, jars, tea pots, and other articles of baked clay of a dark colour, some of them painted and varnished. The dishes, cups, and other porcelain of a white and blue colour, introduced into the Philippines from China, are formed in Quiansi.

Trunks.—Covered with leather, painted and very well varnished, 27 inches long, 18 broad, and 12 deep, cost one dollar.

Hams.—From the north are sold of the weight of 4 or 5 catties for one dollar.

Fruits.—There are various fruits; as those called dates of Nankin, peaches, chesnuts, pears, and water melons, which keep well enough to admit of being exported. The last are excellent.

Snow.—Finally, the snow, which is here very abundant and cheap, might form in every month of the year a profitable return cargo, as it is between India and North America.

The most favourable season for entering Shanghai with a cargo of goods from Manila, is, in my opinion, from September or October until the month of March, April, and May, and more particularly in these latter months. The Chinese vessels, which come with similar cargoes, arrive from the middle of June to the end of September; and I would by no means advise the adventure to be entrusted to the care of a captain or supercargo, because it is very difficult for him to know the languages, the habits and people of the country; and it usually follows that the principal native merchants, knowing that the vessel ca

remain long time, and that in the end it is necessary to sell high or low, agree together, and oblige him to accept low prices; or else the vessel is detained whole months at a loss which the most brilliant profit can scarcely neutralize. The surest method is to consign the vessel and cargo to some trustworthy merchant established in the country, who can, in case of necessity, immediately land and store the goods.

I shall conclude this review with a Price Current of the articles of interest to the commerce of the Philippines, omitting rice as being too fluctuating.

		dollars.
Indigo	per pecul	6 to 7
Lead...	„	6 „ 7
Shark's fins	„	60 „ 30
Biche de Mar	„	40 „ 20
Birds' Nest 1st quality	per catty	50
„ 2nd „	„	20
„ 3rd „	„	2
Humps	per pecul	8 „ 3
Deers' sinews	„	15
Buffalo's hides	„	4 „ 2
Yellow Nankin cloth 38 to 40 dollars	per 100 pieces of $21\frac{1}{2}$ chi each.	
White ditto 54 „ 58 „	ditto	
Ebony	per pecul	1 to $1\frac{1}{2}$
Canes	„	$3\frac{1}{2}$ „ 3
Wheat	„	$1\frac{1}{2}$ „ 2
Flour	„	$2\frac{1}{4}$ „ $2\frac{1}{2}$
Snow (Ice)	„	$\frac{1}{2}$ „ 1-12
Pepper	„	$5\frac{1}{2}$ „ $3\frac{1}{2}$
Ditto, white	„	8
Sapan wood	„	3 „ $3\frac{1}{2}$
Cotton (cleaned) 1st quality ...	„	14 „ 22
Betel nut	„	4 „ $4\frac{1}{2}$
Sugar, 1st quality	„	5 „ $5\frac{1}{2}$
" 2nd ditto	„	$4\frac{1}{2}$ „ 5
" 3rd ditto	„	$3\frac{1}{2}$ „ $4\frac{1}{4}$

Note.—Specimens of these sugars will be sent to Manila, and also above 200 of satins, crapes, and other kinds of silks plain, figured, and embroidered, porcelain, indigo, &c., along with their prices which it would be tedious and useless to detail here.—*Seminario Filipino.*

The Merchant Seaman's Register Ticket.

Sir.—On a further and serious reconsideration of the Merchant Seaman's Register ticket, I find it wanting in another very material point, which, however, like the absence of all inquiry into every thing bearing on moral rectitude, cannot be beneficially introduced, without beginning, *de novo*, in some way more efficient than the plan at present adopted. *I allude to* the state of health generally, and soundness of *body particularly, of* the British Merchant Seaman. Now, independent of the

various ills that human flesh is heir to, from constant change of climate and privations of every kind, I am afraid I speak under par, when I assert that one-third of our Merchant Seamen are suffering from, or from the effects of, cronic venereal disease. As the law now stands, it is impotent towards an effectual redress of this grievance, heavily as it daily presses on the health and ability to work of one part of our Merchant Seamen, and the extra and repulsive labour it entails on the sound part of such crews, as are obliged to do the duty of those laid up with this foul and ruinous disease.

Now, although it sets forth in schedule A "That if any seaman shall have entered himself as qualified for a duty to which he shall prove to be not competent, he shall be subject to a reduction," &c., on the other hand you are told, in sec. 46 and 47, "that this man must not be abandoned or left behind without sanction of Consul," &c. All this seems superficially good; but, for instance, let us suppose that in a crew of twenty hands, three at least are suffering from primary or secondary symptons of this plague spot on the British Seaman. These men will seldom confess to being ill, so as to be approached with proper remedies, before the disease has assumed its most fearful and inveterate aspect, and the result is, that often *for the greater part of a long voyage*, you lose, first, their services,—secondly, their food,—thirdly, their medicine,—and lastly, their wages, which in ninety-nine cases out of a hundred are paid from lack of time to dispute the case in a court of law.

Now, sir, let me ask you, have we at present any means, legislative or otherwise, of counteracting this bane to the health and comfort of our Merchant Seamen? I say, none. But,—

> "What in the Captain 's but a choleric word,
> In the poor sailor is flat blasphemy."

The same man who is allowed to enter himself on board a British Merchant ship, as sound and able to do his duty, with perfect impunity, while at the same time he is teeming with foul disease, would, if proffering his services in her Majesty's Navy, be subjected to the very strictest medical scrutiny, and some little moral inquiry perhaps, and if found wanting be shown over the side again instanter, to carry his broken stamina and inability on board some unlucky ship unprotected by any one means of detecting his utter uselessness. This brings me to the fact of the increased difficulty of procuring good and able hands for our men-of-war as they come into commission. One out of a hundred plain reasons is, that Jack, feeling himself diseased, wont show up, because he knows he'll be rejected on examination.

Alas! I must return to my old question—cannot or will not Government come forward and support and identify themselves with the mercantile world, in a noble, beneficial, and judicial enactment for the proper establishment of Sailors' Homes, where social comfort, rational recreation, and something like moral feeling can be made to assimilate; where sickness, of whatever kind, could be properly treated, by professional men, whose certificate of health could be at all times relied on and forthcoming in the event of shipping a crew; and, as the very first and most absolute step necessary to these most desirable ends, could not the numberless sinks of iniquity and pestilence (the brothels of the foremast

[redacted]

he is left the unadvised and unaided prey of harlots and rogues of the worst description. Why?—evidently not *because* he is unworthy of a better fate, for by his conduct during the voyage he has proved himself otherwise; but because, his services being no longer required, he is let go to the devil his own way, to be feared as a social incubus on land, and acknowledged only on the wide sea as a reasoning animal. He is charged also with hardness of heart, and contempt of God's holy laws and commandments; the first accusation, untrue; the second, acquired, I take it in some measure, by his being mystified in a choice of the thirty or forty different dissenting modes of worship, from the Ranter upwards, existing in this country, each of which professes to be the only true light by which the darkness of the shadow of death can be passed, and the rest all leading, as the Frenchman told the English traveller the other day, when asked by him if the froth of the syllabubs was blown up by the mouth, "Ah! no Monsieur, quite de oder vaye." This dissenting religious warfare, all jests apart, is daily eating into the core of that simple worship of God comprised in faith, hope, and charity, which the fool who goes to laugh at, will remain to venerate.

I have been for some time now living in a Catholic country, Belgium, and on my first arrival here I had a horrid dread of all sorts of bad things about their religion; I had been led to feel unconquerable disgust at its intolerance. When the bells of the Cathedral played the Polka, I fancied I had a kind of hazy view of the old gentleman working the clappers with his tail; and that not to kneel down in the muddy streets, in clean white continuations, if the host was passing, was certain death and probable torture; all which fears were merely brain sick fabrications of my own. Now, I am by no means going to turn Catholic, because the humbug (I beg pardon for the coarseness of the term, but it is too applicable to let slip,) of the confessional, is too palpable a way of extorting the ne plus ultra, through the fear of purgatory, on the minds of those who confess to *mere flesh* the sins of the flesh, to suit my ideas of God's holy attributes. But in justice to the Catholics, I will say that (unlike our own temples of worship) their churches are open to all, at all times nearly, *without* (as at St. Paul's and Westminster Abbey, &c.) a continuous demand on your pocket, alike unpleasant to the donor and disreputable to all who are concerned in making the tabernacle of the Lord a change house of sordid gain. Since I have been here I have never been asked, directly or indirectly, what I thought of their religion, or been told that *my own* was the road to perdition. But on the other hand, in dear Old England there is creeping through the land a mania for sectarian worship, shrouding the pure doctrines of the established Protestant religion and church, as with a pall of controversial darkness, which is daily more and more requiring the united efforts of her clergy to throw off. I am not finding fault with any man for worshipping God *in his own way* in sincerity and truth; my decided opinion is that if he is not permitted to do *that* it is high time to mesmerize him, ad infinitum. *But* as for all those canting, box-begging, love-feasting souls of the ELECT, *the chosen few*, who stay to rant, and groan, and howl, when the minister and congregation have ceased to pray and departed, I could a tale unfold, which I'd rather not—contenting myself with refer-

ring them to that particular passage of holy writ which is found in the 18th chapter of St. Luke, beginning at the 9th verse.

Now, my dear Mr. Editor, I know very well I've been easing off the main sheet and running away large, very improperly, as respects the *course* and *distance* I started on, but if you will pardon my *departure* this time, I'll haul my wind again directly. As follows—Merchant Seamen's Act, sect. 3, sets forth that no master shall take any man to sea with him (being a subject of her Majesty) &c. This observation leads me to your valuable *Nautical Magazine*, for May 1845, p. 234, in which, from the "Diary of a Seaman," the dilemma foreign seamen are placed in by this *native* clause, is well and truly handled in all respects, save and except (I beg pardon for the liberty) the last line, where, speaking of seamen generally, it says:—"But they ought to be allowed to exchange *once* during a voyage, if so disposed." Unlike Midshipman Easy, I *wont* argue the point, but only observe, if the Registry Bill is an excellent measure, towards *compelling* (how true!) seamen to be careful of their conduct, it would be poor policy to leave so wide an opening as the above for the evasion of the ticket and all sorts of desertion. The Diary of a Seaman says all as to foreign seamen, and the bad policy of coercing them unnecessarily, which need be spoken. Some of the best, and certainly the steadiest men in our Merchant Service are Danes, Swedes, Dutchmen, and Norwegians, who are naturalized in England by marriage or long association, and whose loss in time of need would be sincerely felt. Why not, whilst serving with good conduct in British bottoms at sea, and making England their home on shore, allow them to claim a Register Ticket, on the same terms, and liable only to the same penalties for loss, fraud, &c., as the British seaman;—no great boon either.

But now to return to Articles of Agreement, quoted from sec. 3 and schedule A. There ought to be a legal proviso entered on the heading of this schedule, that any man who shall sign Articles on board any ship as sound, able, and willing, he at the same time suffering from venereal disease, shall for every such offence forfeit all pay for the time he is sick, and a further reduction of as many extra days pay as he has been off duty, from the effects of his disease. And secondly, as seamen are required to sign their names at full length, and as half the letters of such tarry manuscripts will be found barely within hail of each other, it would appear advisable to print forms, leaving a fathom (more or less as required) in the column for the names; for, without this sort of paper, printed *according to law*, it 's hard to fine Captains heavily, (as at the Cape of Good Hope,) because Jack cannot steer small with his pen. And thirdly, the forms of agreement as set forth in schedules A and B, are alike fearfully deficient, in the omission, and total absence of a column headed—*Conduct;* as also a column headed—*Health*. The first, that of conduct, I deem to be immeasurably superior in importance to every other desideratum, *and not to be dispensed with*. Sec. 4, says:—"Any master carrying out to sea with him any seaman, or other person, without his Register Ticket, shall be liable, &c." This clause, as relates to Great Britain, is just, and necessary to the furtherance of Act. But some little latitude ought to be, I think, extended to Cap-

tains shipping hands in foreign ports, where, from sickness or desertion, or both, they are left with barely a fourth of their original crew, at first, barely adequate to navigate their ship :—par example—suppose a vessel at Demerara having lost, from yellow fever and desertion, eight out of twenty hands, the residue being sick, she cannot go to sea without more men, and although able seamen offer themselves, having lost or destroyed their Register Tickets, the Captain cannot ship any one of them without subjecting himself to a penalty of ten pounds. Sec. 6, says :—"And whenever any seaman shall be committed to prison, or to any house of correction, the Justice shall cause his Register Ticket to be delivered to the Governor or Keeper of such prison, or house of correction, who shall retain the same, during the period of the seaman's imprisonment, and at the expiration of such period *shall return the Register Ticket to the seaman.*" This I hold to be an ill-advised regulation; for supposing the seaman's ship to be still in the port of his imprisonment, he being one of her crew, and his services daily required on board, his Register Ticket should, in that instance, be assuredly placed in the hands of his Captain, and the man himself conveyed *on board* under charge of some official person, to avoid the almost certainty of his desertion.

Mr. Editor, after sundry ineffectual attempts, I find myself perfectly unable to follow up the thread of my discourse; my excuses being, that I am living at Flushing, *sub mare sub terris*—the sun has not shown his face for nine days, and I hear that the Commander of a Sicilian frigate in the roads has made serious inquiries as to whether he ever does show up thus far north; add to all this, a diurnal and nocturnal pouring of that particular rain which makes you *feel* moist when not even exposed to it; and I have some faint hopes you will pardon this free and easy digression. I have no right to be too sure on that head though, for at this very moment I call to mind the lamentable fact, of my having lost the good opinion of a gentleman whom I have great esteem for, high in the administration of a Steam Navigation Company, from having made use of that purely Irish expression "con*va*nient," for "at your service." I saw and was sorry for the fault when all too late, which I verily believe lost me a patron and a good ship. I'm afraid my verdict will be "*sarved him right.*" Poor Pat! he is always on the wrong tack. I remember well, when Quadrilles first came in fashion at Cork, an English officer vainly attempting to teach an Irish squireen the proper evolutions, and at last on saying to him with great good nature, "You are my *vis a vis*;" Pat burst out with—"What 's dat you're saying, sur? you're *another*, and a d——d scoundrel besides."

M. M. KEANE.

MR. LOSEBY'S IMPROVEMENT IN CHRONOMETERS.

NOTWITHSTANDING the important improvements which have of late years been made in the construction of chronometers, the radical defect of their liability to change their rates with change of temperature, is yet

inherent in the construction of most of them. To overcome this great fault, in fact, is the grand object to which all the attempts at improvement, if any, are now directed. Mr. Loseby, a chronometer-maker, has applied his resources to this object; and although it would be premature to explain the means which he has adopted to attain it, yet the degree of success which has attended his efforts, induces us to record the following report on the subject from the Astronomer-Royal, at Greenwich; the chronometers having undergone a rigid trial of some months at the Royal Observatory.

"I have the honor to acknowledge your letter of the 22nd inst., conveying the desire of My Lords Commissioners of the Admiralty, that I would state my opinion on the principle of Mr. Loseby's chronometers.

"In reply I have the honor to make the following report, which for clearness I divide under the two heads of—The mechanical construction of the chronometers, as shewn by trial with reference to the points to which the peculiarities of Mr. Loseby's construction are directed.

"1.—*The Mechanical Construction of Mr. Loseby's Chronometers.*—The defect in chronometers, which it is the object of this construction to remove, is the same which Mr. Eiffe removed with considerable success, by constructions described in a work published under the authority of the Board of Admiralty; a defect to which the efforts of other chronometer-makers have been directed. It is this, that if the compensation of chronometers is perfectly adjusted for very high and very low temperatures, the chronometers will gain at middle temperatures.

(We have omitted a few lines of the report at the request of Mr. Loseby.)

"I consider this contrivance (taking advantage very happily of the two distinguishing properties of mercury, its fluidity, and its great thermal expansion) as the most ingenious that I have ever seen, and the most perfectly adaptable to the wants of chronometers. I am not aware that it is liable to any special inconvenience.

"2.—*The Performance of the Chronometers as shewn by trials.*—When Mr. Loseby placed in my hands chronometers Nos. 101 and 104, he delivered to me also a paper, from which the following sentences are extracted:—'The chronometers now sent are adjusted so that No. 104 will gain at 20°, while No. 101 will gain at 110°, and *both will lose in the intermediate temperatures.* This (No. 101,) will be found to lose less than 104.'

"The success of the principle is, therefore, not to be judged by the absolute steadiness of rate of the chronometers, but by their conformity to the statement which I have cited. I remark that if the chronometers are made '*to lose in the intermediate temperatures,*' the principle is perfectly successful, because the workman, by diminishing the influence of this peculiar construction, can make the chronometer's rate steady in the intermediate temperatures.

"In order to show more clearly the relative value of these chronometers, I think it proper to compare with them a very fine chronometer, now on trial at the Royal Observatory, which has been subjected to the same trials in every respect as Mr. Loseby's chronometers. It is unnecessary to give all the separate 'weekly sums of daily rates,' of which

the means are stated below, as every number is given in the 'Weekly Report of Chronometers, at the Royal Observatory,' transmitted by me to the Hydrographer.

"*Low Temperatures.*—Mean of the temperatures, and of weekly sums of daily rates for the week ending Feb. 1st, 8th, 15th; March 1st, 15th, 22nd. Weekly sum of daily rates. Temperature 32°·9.

Loseby 101, —6s·98; Loseby 104, +2s.22; Trial chron. 348, +0s·50.

"*Middte Temperatures.*—Mean for the weeks ending April 12th, 19th, 26th; May 3rd, 10th, 17th, 24th. Temperature 52°·6.

Loseby 101, —12s·94; Loseby 104, +0s·14; chron. 348, +6s·43.

"*High Temperatures.*—Mean for the weeks ending Feb. 22nd, Mar. 8th, 29th; April 5th. Temperature 92°·1.

Loseby 101, —4s·70; Loseby 104, —24s·05; chron. 348, +1s·65.

"It appears, therefore, that Loseby 104, does gain at the low temperatures as compared with the high ones, and that Loseby 101 gains (but in a smaller degree) at the high temperature, as compared with the low ones. From this circumstance, and from the general steadiness of both chronometers in the individual weeks of each state of temperature, I think it appears that they are fundamentally in the same condition in which Mr. Loseby delivered them for trial.

"Now, in order to ascertain the peculiar effect of the new principle, I interpolate between the rates at extreme temperatures so as to obtain a rate at mean temperature corresponding to a uniform defect in the primary conformation, and compare this with the rate actually observed at mean temperatures.

"Interpolated weekly sums for daily rates for Temperature 52°·6.

Loseby 101, —6s·22; Loseby 104, —6s·54; chron, 348, +0s·88.

"Observed weekly sums for temperature 52°·6.

Loseby 101, —12s·94; Loseby 104, +0s·14; chron. 348, +6s·43.

"Excess of the observed weekly sums at middle temperature.

Loseby 101, —6s·72; Loseby 104, +6s·68; chron. 348, +5s·55.

"It appears, therefore, that Loseby 101, *does lose at middle temperatures*; and, therefore, in this instance I consider that the principle is successful; (so far as I remember) this is the only instance which has come before me, in which the loss at middle temperature is well marked.

"But Loseby 104 *gains* at middle temperatures, and here the principle failed. The Trial chronometer 348 (which contains a special contrivance for the same purpose) fails in nearly the same degree. These two chronometers are defective in the same direction, but by no means to the same extent as ordinary chronometers.

"Upon the whole, knowing how very difficult it is to make any mechanical contrivance fulfil its intention at the first trial, and remarking that in one of the instances exhibited, the ordinary defect of chronometers is mastered, and even reversed, I think it my duty to report, as my opinion, that Mr. Loseby's construction has successfully effected its object.

"And remarking the ingenuity of the method used, and the fertility of its principle, I state, as my opinion, to the Board of Admiralty that Mr. Loseby is entitled to their Lordships' general encouragement."

The Felicidade.

[In the following instance of firmness and energy under extreme suffering and danger, Lieut. Wilson has nobly sustained the character of a British Seaman.—Ed.]

The Heive, near Kendal.

Sir.—Thinking it probable that an account of the loss of the Brazilian schooner Felicidade, when in charge of my son, Lieut. Wilson, may be acceptable to the readers of the *Nautical Magazine*, I have taken the liberty of sending a narrative of the escape and sufferings of himself and crew for insertion, if you approve of it.

I remain, &c.,

To the Editor, &c. John Wilson.

On the 6th of March last, the Felicidade, a Brazilian two-topsail schooner fitted for the slave trade, was detained by H.M.S. *Star*, and Lieut. Wilson was sent on board with four seamen, three Kroomen, and two Brazilians, to navigate her to Sierra Leone for adjudication.

On the 16th of March, in lat. 1° 18′ N., long. 3° 30′ W. at noon, Cape Three Points, the nearest land, bearing N.N.E., distant 230 miles, about 3 P.M. when under all sail, steering W.N.W. with a breeze from the southward, a squall was observed coming up astern; sail was immediately shortened, but the man at the helm, instead of keeping her on the course she was steering, as he was ordered by Lieut. Wilson to do, put the helm a-port, and thus brought her by the lee. The squall took her at the same moment, and she turned over in an instant on her beam ends and filled,. The squall passed over in about a quarter of an hour; no lives had been lost, and the whole number were huddled together on the gunwale.

Having no boat, and fearing she might not float long, the only expedient that occurred to them for saving their lives was the construction of a raft, which was immediately set about. Three of the seamen had knives, with which they began at once to cut away all the spars, canvas, and cordage that could be got at. The main-boom was not obtained without great difficulty, and then only by the Kroomen diving and cutting the gear under water. Before dark they had succeeded in lashing the main-yard, fore and main top-sail and top-gallant yards, studding-sail booms and gaffs for a raft. It was then shifted to leeward of the vessel, and all hands, ten in number, got upon it, apprehensive that the vessel might sink during the night.

In the morning finding the raft was hardly able to carry them all, the fore-yard was added as an outside spar, the main-boom being on the other side, and all the smaller spars amidships. The only provisions they could procure was a little putrid pork, and about 1½ gallon of rum which had been lashed in a cask on deck. Neither any water nor any thing else could be obtained, for the Kroomen, though expert divers, were prevented by the slave deck from getting into the vessel. Having nothing but their light clothing, some canvas was taken from the sails to serve as a protection from the weather, and all the small rope that could be procured was placed upon the raft for the purpose of replacing the lashings in case they should wear out. As much of the planking of the bulwarks as could be torn off, was also preserved for paddles to steer with, and for seats.

About 9 A.M. of the 17th, finding the schooner had settled down considerably, and that nothing more was to be got from her, a mast and sail was rigged, and they cast off from the wreck, in good spirits, in the hope of reaching the land. Having no compass, the sun by day and the stars by night were their only guide.

For four days there was no appearance of rain, and all suffered much from thirst. So few clothes had been saved that in the day time they were scorched by the sun, and at night the cold was intense. From the weight of the raft, and the circumstance of all the spars having their fittings upon them, it swam very deep, which kept them constantly immersed in water, and if they lay down the sea washed over their heads; in fact, the fore part of the wreck was from two to three feet under water. On the fifth day they caught a little rain water, which served to revive every one, and on the seventh they obtained another, though more scanty supply. The effects of exposure, and of such privation began now to be severely felt; on the ninth day two of the Kroomen were delirious from drinking salt water, and in the evening the quarter-master from the same cause; notwithstanding their having been earnestly cautioned against it, and the inevitable consequences pointed out.

The sharks, which had followed them from the third day, began now to swarm around the raft, and an attempt was successfully made to catch one. A bait was held out, and when a shark was in the act of turning, one of the Kroomen seized it by the tail; a rope was immediately made fast, and the men cut him across the back with their knives, which made him comparatively powerless, and by their united efforts he was dragged upon the raft, he measured between seven and eight feet in length. The blood and flesh revived them, and on that day, the tenth from leaving the wreck, it rained heavily, which enabled them to assuage their thirst, and fill the empty rum cask half full of water; nothing, however, could restore the two Kroomen and quarter-master, who were previously delirious. The next morning one of the Kroomen was found dead on the raft; the other died during the day, and the quarter-master in the evening; giving them fearful warning of the effect of drinking salt-water.

The greatest care was taken of the stock of water, a mouthful was served out three times a day in the heel of a shoe. They caught at intervals three more sharks in the same manner as before, and some flying fish; the latter they could scarcely swallow, so parched were their throats. They found the sharks more nourishing, and easier to eat.

It rained once or twice afterwards, but the sea washed over them in such a manner that they found it impossible to catch any water.

Their utmost efforts were now required to keep the raft together; it often got adrift, and little rope was left to secure it. Their limbs were so swollen and ulcerated that they could scarcely move. The mast had fallen down, and they were unable to raise it, so that all hope of reaching the land began to fail them. Nevertheless the English seamen were resigned and obedient. On the 3rd of April one of the Brazilians died.

On the evening of the 4th April, after having been nineteen days on the raft they saw land. On the morning of the 5th, after a very squally night, it was again out of sight: they were cheered soon after daylight by seeing a sail to leeward, and the hope of being saved gave them strength to stand up and make signals, but in vain, for she shortly

afterwards bore up and left them. Before she was out of sight another sail was observed, which, after communicating with the first stood towards them, and they were shortly afterwards taken off the raft by a boat from H.M. brig *Cygnet*, being then about thirty miles to leeward of St. Paula. Four hours after they were picked up, the other Brazilian died, he also had drunk salt water. The conduct of the men was most exemplary throughout, and under the Providence of God was no doubt mainly instrumental in saving their lives.

Guano Islands.

Between Possession Island and Angra Pequena is an island not marked in the charts, and to which has been given the name "Ludovic." This island (a mile in circumference) is connected with the continent at its southern end by a chain of rocks, on which the sea breaks. It is in lat. 25° 55′ S., and contains about 10,000 tons of good Guano.

To the east of the island there is anchorage in 9 fathoms for three or four ships, but it is an anchorage little frequented on account of the high sea which continually runs through the narrow channel at the north end of the island.

On Hollam's Bird Island is a mass of Guano of excellent quality consisting of about 10,000 tons. It has been passed on account of local dangers, and the risk that is run in obtaining it. The sea being always very rough round the island it is not possible to construct a wharf from which to embark it. Hollam's Bird Island is in lat. 26° 38′, it is not more than a quarter of a mile in circumference, and leaves a channel between it and the continent, about ten miles wide. A chain of reefs, which extending from the north point round the west side of the island, and to the south-west to five or six miles from it, renders the approach to it from the southward very dangerous. Vessels anchor to the north-east of the island in 10 fathoms rocky bottom.

Between the Cape of Good Hope and Cape Voltas there are five depots of Guano.

1. In False Bay on Seal Island of about 10,000 tons.

2. In Saldanha Bay on Isles Julien, where it is difficult to get, and not of good quality; that on Isle Marens, mingled with feathers and broken shells cannot be used without being sifted and dried; that on Isle Malaga is of excellent quality, and in full work, amounting to about 48,000 tons.

3. Between Cape Voltas and Benguela, eleven depots of Guano have been discovered, nine of which have been exhausted; they are those of Plum Pudding, Boyds, Bob, Possession, Merman, Penguin Seal, Ichabo, and Mercury. Two others remain for working, that of Ludovic and that of Hollam's Bird Island, of excellent quality, but difficult to obtain.

The depots of Guano on the Coast of Africa between the Cape and Benguela being exhausted, or nearly so, the great number of English ships which were there departed about the end of 1844 to explore the coast between the Cape and the Red Sea. It seems that east of the Cape a depot of Guano is formed in Algoa Bay. This however is not good, and

was abandoned after producing a profit of ten shillings per ton to the government of Natal.

Another depot of Guano twice as large as that of Ichabo, and of as good quality is on Tom's Island in lat. 6° 42′ S., and 39° 54′. The government of Cape Town, it is said, has taken possession of it; and a recent order of the government declaring all the deposits of Guano, not on particular property, as belonging to the Queen, seems to confirm the report. A third deposit of Guano on an island somewhere to the north of Latham Island, has been lately discovered, the position of which is not exactly known; but this island is in the dominions of the Imaum of Muscat who it is said has agreed to its shipment under the protection of the British Government.

We have the foregoing from an officer just returned from the coast. In addition to the places he has stated we have no doubt that considerable quantities will be found on the islands of the Eastern coast. Our readers will remember in our last volume in an account of Zanzibar and its islands, by Capt. W. Owen, mention was made of considerable deposits there.

In addition to the above, on the authority of accounts just received from the Western Coast of Africa, we recommend no more vessels to visit Arguin, for Guano, for there is none of it even in the neighbourhood. The land is merely a low succession of drifting sand-hills with no shrubs or vegetation whatever. On none of the published charts could the least reliance be placed, but in the neighbourhood of Cape Blanco, the soundings, as laid down in the Admiralty chart, were found perfectly correct.

The Experimental Cruize of Line of Battle Ships.—(*From the Observations of Lieut. Ryder, R.N.*)

We have received from Lieut. Alfred Ryder, R.N., the following concise result of his observations on the several ships on the late experimental cruize in the Bay of Biscay. This officer accompanied the Squadron in the Rodney, and wisely contents himself with doing only the work which he sets himself, namely that of stating facts as nearly as his perceptions enabled him to arrive at them. His system of planning the results is new, as he dispenses at once with long lines of courses, but from bearings and distances at the commencement and end of a trial lays down the positions of the ships left and arrived at, from which the following results are obtained. There is no doubt that some small discrepancies may appear in them—indeed, when distances are found by mast-head angles this may be expected. Our readers must not, therefore, receive these as so unexceptionable as the official account would be, but they will serve to convey some idea of the sailing qualities of each ship. In another number we shall explain Lieut. Ryder's plan, which in our opinion is remarkable for its conciseness.

Date.	Ships' Names.	Interval of trial.	Force of wind.	State of weather.	Sail Rodney was under.	Inclination. Time.	Inclination. Amount	Direction of progress made with regard to Rodney.
19th July Run 73 miles. Rate 8 knots.	St. Vincent Canopus Trafalgar Queen Albion Vanguard Superb	9 A.M. to 6 P.M.	5	bcv	Before the wind. all studding sails.			dropped gained dropped gained dropped dropped dropped
21st July Rate 5 knots.	Superb	2.10 P.M. to 4.17 P.M.	6	cm	by th wd. whole top & t.g. sls.	3.0	6°	gained
26th July Rate 5 knots.	Superb	10.10 A.M. to 3.38 P.M.	4 5	c cqr	by th wd. whle tps. royals,&c			dropped
27th July Rate 5 knots.	St. Vincent Canopus Trafalgar Albion Vanguard Superb Queen	1 20 to 2.3 2.33 " 3.38 1.20 " 2.3 2.33 " 3.38 1.20 " 2 3 2.33 " 3.38 1.20 " 2.3 2.33 " 3.38 1.20 " 2.3 2.33 " 3 38 1.20 " 2 3 2.33 " 3.38 1.20 " 2.3 2.33 " 3.38	4 5	c cqr	by th wd. whole topsails, royals, &c.	9.30	6° 0	 dropped dropped dropped gained dropped dropped dropped dropped gained gained
28th July Rate 6 to 7 knots.	Canopus Albion Vanguard Superb	10.9 A.M. to 1.50 P.M.	5	bc	by th wd. single rf. top and t. g. sails	11.0 1.50	5° 5½ to 9½	gained gained dropped dropped
29th July Rate 4 knots.	Trafalgar Queen Albion Vanguard Canopus Superb	10.20 A.M. to 3.5. P.M.	4	bc	by th wd. royals, &c.	11.0	6½° pitchg. and scdg. thro't. 5° to 6°	gained dropped dropped dropped dropped dropped
30th July Rate 7 to 8 knots.	Superb Canopus	3.30 P.M. to 6.10 P.M	6	bcq	by th wd. sgl. rf. & t. g. sails	4.0 pitchg. & scd	9° to 7° thro' 7° to 8°	dropped dropped
31st July Rate 5 to 6 knots.	Superb	1.42 P.M. to 4.30 P.M.	5	bc	on th wd. dbl. reef topsails.			dropped

Dist. in yards.	Order of the ships at the end of the trial arranged according to amount of gain and loss.	Angle tacked in frm Helm ordd down until Sails were full.	REMARKS.
5245 500 16250 85 320 5640 3225	Canopus Queen Rodney Albion Superb St. Vince nt Vanguard Trafalgar		
1450	Superb Rodney	2m. 20s.	
4130	Rodney Superb		Having, in company with "Superb," stood away to some distance from the squadron, the trial with *her* is considered to extend during the day.
  160 300 770 190 100 700 1100 1580 1890 450 540	Queen Rodney St. Vincent Albion Canopus Trafalgar Vanguard Superb	 116° 0 2m. 0s. 2m. 40s.	The "Rodney" having stood away from the squadron out of mast-head angle distance, and having, in company with the Superb, tacked three times, while the rest of the squadron had only tacked once, the trial with them is not considered to have commenced until after the "Rodney's" return to the fleet. The station is taken immediately after tacking in their wake. The interval between 2h. 3m. and 2h. 33m. is not given, because the wind was variable.
1160 1600 550 400	Albion Canopus Rodney Superb Vanguard		This does certainly not agree with the apparent positions of the ships just before the shift of wind, after which we were re-called, nor with the opinion generally expressed by the officers, who thought the Rodney was beaten by all the ships. I can attribute this difference only to the shifts of wind during the day.
310 140 590 1030 1020 1380	Trafalgar Rodney Queen Albion Canopus Vanguard Superb		Fore Yard 27° } with Main Yard 22° } keel. Strong head sea.
1615 1060	Rodney Canopus Superb		Superb 6° } Canopus 7° } angle of inclination. Helm ⅛ a Rodney 8° } turn weather.
407	Rodney Superb	2m. 25s.	

Date.	Ships' Names.	Interval of trial.	Force of wind.	State of weather.	Sail Railway was under.	Inclination.		Direction of progress made with regard to Railway.
						Time.	Amount.	
2nd Aug. Rate 6 knots.	Queen Trafalgar Superb	10.45 A.M. to 3.15 P.M.	5	bc	by th wd. single rf. and t. g. sails.		7° 4½ 5	gained dropped dropped
6th Aug. Rate 5 knots.	St. Vincent Queen Trafalgar Albion Canopus Vanguard Superb	10.40 A.M. to 4.50 P.M.	4	bc	by th wd. royals, &c.	11.25	SV. 5° Q. 4 T. 5 A. 3½ C. 4 V. 4½ S. 3 R. 4½	dropped gained dropped gained gained dropped dropped
6th Aug. Rate 7 to 8 knots.	St. Vincent Queen Trafalgar Albion Canopus Vanguard Superb	11.36 A.M. to 3.36 P.M.	4	bc	wind on starboard cam. all starboard studding sails.			gained gained dropped gained gained dropped dropped
7th Aug. Rate 5 knots.	St. Vincent Queen Trafalgar Albion Canopus Vanguard Superb	10.15 A.M. to 3.15 P.M.	4	bc	by th wd. royals, &c.			dropped gained dropped gained dropped dropped dropped
9th Aug. Rate 4 to 5 knots.	St. Vincent Queen Trafalgar Albion Canopus Vanguard Superb	10.10 A.M. to 1.32 P.M.	4	bnc	by th wd. royals, 1st reefs, &c.	1.30	R. 6° SV. 6½ Q. 6 T. 5 A. 3½ C. 5 V. 5 S. 3½	dropped gained dropped gained dropped dropped dropped
9th Aug. 5 to 6 knots.	St. Vincent Queen Trafalgar Albion Canopus Vanguard Superb	10.10 A.M. to 3.5 P.M.	5	bc	by th wd. royals and 1st reefs.	4.0	R. 5½ SV. 5½ Q. 3½ T. 4° A. 4 C. 5½ V. 3 S. 4½	dropped gained gained gained gained dropped dropped
th Aug late nots.	St. Vincent Queen Trafalgar Albion Canopus Vanguard Superb	12.10 P.M. to 5.55 P.M.	5	bc	by th wd sgl. rf. & t. g. sails and after 1.40 royals.		R. not und sl. Q. 3½ T. 5½ C. 4½ V. 3 S. 2	gained gained dropped gained gained dropped dropped

Dist. in yards,	Order of the ships at the end of the trial arranged according to amount of gain and loss.	Angle tacked in frm Helm ordd down until Sails were full.	REMARKS.
770 725 570	Queen Rodney Superb Trafalgar		The "Queen" and "Trafalgar" being ordered to try rate of sailing, and being close to us during the day, we were enabled to include them in our own trial with "Superb."
630 2720 530 690 2010 1320 1340	Queen Canopus Albion Rodney Trafalgar St. Vincent Vanguard Superb	115° 3m. 40s. 115° 3m. 7s. 116° 2m. 25s	Each ship's trial was considered to be concluded after she had made her final tack; with the Canopus only this was not followed out—her gain, therefore, of 2010 yards should be diminished by about 250 yards, the average distance that we find by experiment a ship loses by tacking.
1510 11343 1600 7610 2490 1410 2300	Queen Albion Canopus St. Vincent Rodney Vanguard Trafalgar Superb		From 12h. to 2h. 30m. the Rodney hung on the Vanguard's port quarter, not being able to pass out of the influence of her sails without altering course. At 2h. 30m. succeeded in shaking off Vanguard, and immediately gained on all the ships except Queen and Albion. As in addition to this she had evidently gained on all the squadron, except those two ships, before 12h., I have given her the third place.
1050 1740 790 490 120 5070 3060	Queen Albion Rodney Canopus Trafalgar St. Vincent Superb Vanguard	117° 2m. 45s. 2m. 56s.	
1090 500 540 120 330 2040 2210	Queen Albion Rodney Canopus Trafalgar St Vincent Vanguard Superb	3m. 5s. main yd. 21° Fore yd. 25½	The Rodney was prevented from continuing the trial by losing her main top-gallant mast. The Canopus probably lost one place by bearing up to keep out of the influence of Trafalgar's sails. As this is a general trial, this is the position of the ships used in finding the result for the cruize, changing the place of Vanguard and Superb.
290 2100 760 1300 770 1960 1570	Queen Albion Canopus Trafalgar St. Vincent Superb Vanguard		The trial was concluded at 3h. 5m. P.M.—an hour after the Rodney lost her main top-gallant mast. The position of the ships at the end of the race are gained therefore independent of her, though, in fact, she came in fifth, notwithstanding her accident. Rattler's inclination 5°
40 2200 1820 2370 2170 8300 7340	Queen Albion Canopus St. Vincent Rodney Trafalgar Superb Vanguard		As the Rodney by springing her fore topsail yard was disabled until 12h. 10m., the trial is considered to have commenced at that hour although there are earlier observations for the positions of the other ships. The Queen in tacking twice must have lost 500 or 600 yards, and has therefore been given the first place. Main yard 24°, fore yard 25½°

Date.	Ships' Names.	Interval of trial.	Force of wind.	State of weather.	Sail Rodney was under.	Inclination. Time.	Inclination. Amount	Direction of progress made with regard to Rodney.
14th Aug Rate 5 knots in forenoon to 2½ knots in the afternoon.	St. Vincent	10.5 A.M. to 3.0 P.M.	3	bc	by th wd. royals, &c.	11.0	SV. 5	dropped
	Queen						Q. 2	gained
	Trafalgar						T. 2	dropped
	Albion						A. 1½	gained
	Canopus						C. 3½	dropped
	Vanguard						V. 1	dropped
	Superb						S. 2	dropped
							R. 3½	
15th Aug Rate 6 knots.	St. Vincent	2.20 P.M. to 5.55 P.M.	3 4	bc	before the wind, all studding sails.			dropped
	Queen							gained
	Trafalgar							dropped
	Albion							dropped
	Canopus							dropped
	Vanguard							dropped
	Superb							dropped
18th Aug Rate 7 to 6 knots. Run 16 miles 2 knots.	St. Vincent	11.5 A.M. to 1.24 P.M.	4	mc	wind a-beam and on the quar. all port studding sails.	11.0	R. 4°	dropped
	Queen							gained
	Trafalgar							dropped
	Albion							dropped
	Canopus							dropped
	Vanguard							dropped
	Superb							dropped
19th Aug Rate 9 to 6 knots.							R. 7°	
	Canopus	10. A.M. to 1.30 P.M.	6	bc	by th wd. dbl. reefs and t. g. sails.	10.0	C. 8	dropped
	Vanguard						V. 6	dropped
	Superb						S. 4½	dropped
							SV. 7	
	Queen	11.30 A.M. to 1.30 P.M.	6	bc			Q. 6½	gained
	Trafalgar						T. 7½	dropped
	Albion						A. 4½	dropped
22nd Aug Rate 6 to 7 knots.	St. Vincent	1.27 to 5.22	4	bc	by th wd. royals, &c.		SV. 7°	dropped
	Queen						Q. 3½	gained
	Trafalgar						T. 6	dropped
	Albion						A. 3	gained
	Canopus						C. 8	dropped
	Vanguard						V. 3	dropped
	Superb						S. 3½	dropped
							R. 8	

Although the Interval is correct, the times cannot be expected to correspond with that of other ships, as our longitudes were often materially different; slight discrepancies must therefore be expected in comparing the result from different ships.

The Squadron were often under very different sail; in some cases the difference has been obtained—it is not given here for fear of extending the report.

The Inclinations that were obtained by signal simultaneously with other ships are, with a few exceptions, the only ones given, being of most value.

In the above results the gains and losses are all given on Rodney, but if it is *wished* to compare any other ships together, their gains or losses on each other can

Dist. in yards.	Ordered of the ships at the end of the trial, arranged according to amount of gain and loss.	Angle tacked in from helm ordd. down until sails were full.	REMARKS.
1330 6340 10 920 700 2310 764	Queen Albion Rodney Trafalgar Canopus Superb St. Vincent Vanguard		The wind was so light to-day that the results cannot be considered very satisfactory. Main yard 23°, fore yard 25°.
770 1150 3700 70 470 3280 2100	Queen Rodney Albion Canopus St. Vincent Superb Vanguard Trafalgar		The trial of sailing was considered to have commenced after Vanguard had picked up a man that fell overboard, trimmed and made sail, and the last observations, as the weather was hazy and the ships almost invisible, were made about twenty minutes before the recall, just before a shower of rain.
1850 5790 3000 840 3990 3480 2100	Queen Rodney Albion St. Vincent Superb Trafalgar Vanguard Canopus		The last observations were made shortly before the weather became so hazy that none of the ships could be seen sufficiently clear to measure mast head angles. Main yard 31°, fore yard 38°. Trimmed in occasionally, wind coming aft.
1190 610 1930	Rodney Vanguard Canopus Superb	2m. 30s. helm ½t W.	The last station of the Vanguard was obtained at 12h. 30m., after which she continued dropping. The fact of the Vanguard weathering us is no proof that she beat us, as she started to windward and we made an extra tack.
20 820 500	Queen Albion Vanguard		The Albion had to send her main top-gallant yard on deck, by which she must have lost ground considerably. As we were some distance from these ships our evidence should not be considered of much value. For the same reason the trials have not been united.
870 3750 *380 10 1070 5110 4680	Queen Albion Rodney Trafalgar St. Vincent Canopus Superb Vanguard	110° 2m. 40s.	The Trafalgar did not tack during the trial, I have therefore added 200 yards to her loss, that being the distance that it was found the Rodney lost in stays. In the latter part of trial Rodney heeled 5½°. At first, main yard 24°, fore yard 26°, when fore yard was braced to 24°, Rodney started ahead immediately.

easily be ascertained by adding or subtracting, as the case may be, their gains or losses on the Rodney.

As a general rule the Rodney tacked in 116°, and, from helm being ordered down to the sails being full, generally occupied about 2m. 50s. Angle of main yard varied from 19° to 24°, and fore yard from 24° to 28°.

REMARKS.

To obtain the above results about five or six diagrams he each day. The distances gained and dropped given in the measured in the *off the wind trials* on the line corres the *by the wind trials* on the line corresponding to the d

* 180 + 200 for a tack.

The method pursued enabled the observers to make allowance for shifts of wind; such being the case, the final result given at the close of each day's trial cannot be expected to agree with the *apparent* positions of the ships, for as a shift of wind always favours one part of the squadron to the disadvantage of the other, the *apparent* positions afford a very poor criterion of the gains and losses during the day.

The plan adopted will be explained in a future number. The distances have been obtained from mast head angles.

Result of the Experimental Cruize up to 22nd August, 1845.

Ships Names.	Point of Sailing.	Places occupied in general Trials by difft Ships. 1st Place	2nd Place	3rd Place	4th Place	5th Place	6th Place	7th Place	8th Place	Total off th Wind	Total by th Wind	Grand Total.
Queen	Off wind	3	1							31		87
	On wind	7									56	
St. Vincent	Off wind				1	2	1			16		43
	On wind		1		1	1	3	1			27	
Trafalgar	Off wind						1	1	2	7		35
	On wind				2	3	2				28	
Albion	Off wind		1	2	1					24		70
	On wind		5	1	1						46	
Canopus	Off wind	1			2				1	19		54
	On wind		1	2	1	2	1				35	
Vanguard	Off wind						1	3		9		18
	On wind							2	5		9	
Superb	Off wind					2	1		1	12		25
	On wind						1	4	2		13	
Rodney	Off wind		2	2						26		67
	On wind		2	2	2						41	

Numbers allowed for each place { 8 7 6 5 4 3 2 1 } then by giving a value 8 to each ship each time she occupies the 1st place
7 " " 2nd "
we obtain the numbers given in the right hand columns, which enable us to arrange the ships in the following order, indicating the performance of each ship during the cruise.

This method of ascertaining the comparative merits of different ships forming the Squadron is only applicable to general trials; the small distinct trials must be viewed separately.

	Off the wind.		By the wind.		Taking both sailing together.	
1	Queen	31	Queen	56	Queen	87
2	Rodney	26	Albion	46	Albion	70
3	Albion	24	Rodney	41	Rodney	67
4	Canopus	19	Canopus	35	Canopus	54
5	St. Vincent	16	Trafalgar	28	St. Vincent	43
6	Superb	12	St. Vincent	27	Trafalgar	35
7	Vanguard	9	Superb	13	Superb	25
8	Trafalgar	7	Vanguard	9	Vanguard	18

The trials from which the above results are deduced are the 19th and 26th of *July*, and the 5th, 6th, 7th, 9th, 13th, 14th, 15th, 19th, and 22nd of August.

WRECKS AT SEA.—Between 36° and 48° N., and 24° and 28° W., we caution vessels running over wrecks. Again in 49° N., and 18° W., the Tallyho was abandoned on the 2nd of September in consequence of the damage she sustained by running foul of the French ship Zampa, she therefore remains as a stumbling block for others. The Sylph of Guernsey struck one on the 8th of August in 45½° N. A large vessel scuttled shewing her white bottom in proof that she will not go down—a brig water-logged with only bowsprit standing, a vessel called the Hope of London, another called the Mary, and the Lancer of Sunderland, further west, with the above-mentioned Tallyho are noticed in the *Shipping and Mercantile Gazette* as composing a portion, we fear only, of these formidable dangers, which render Navigation as unsafe on the wide Ocean as in the narrow seas, and a good *look out ahead* quite as necessary.

NOTICES OF SHIPS BY BIRDS.

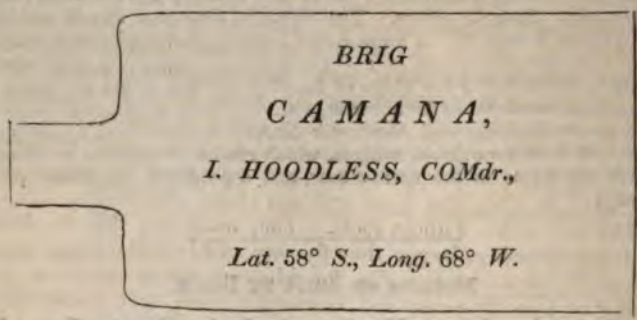
THE following letter from Mr. Peacock, an intelligent officer of the Pacific Steam Navigation Company, and formerly of the Royal Navy, will suggest an amusement to our readers, which may prove more useful in a commercial point of view, than that of throwing bottles overboard has been in a nautical one. The use of birds in carrying despatches we all know is a very ancient practice, and has been employed with much success. We heard of even a race the other day between the same kind of birds of a different breed, that confirmed the wonderful power of these creatures in finding their homes from the distance of 25 miles at the rate of about a mile per minute. And not many weeks ago an account appeared in the papers of a bird arriving from Ichabo, the famed Guano depôt on the coast of Africa, at the enormous distance of 4600 miles. The paper it is reported to have carried, alluded to two others sent off at the same time; but, as these have not been heard of, the statement yet requires confirmation. The account, however, sent us by Mr. Peacock is interesting, in so far as it gives a practical proof of the approach of a vessel being accidentally announced at the very port of her destination nine days before she arrived there, and from a distance of about 2,000 miles. The amusement of thus sending off birds with such notices may be productive of benefit to trade; but while we point it out for the adoption of our nautical readers, we hope that we shall not be the means of bringing down acts of cruelty on the birds, whose powers of usefulness alone entitle them to kind treatment.

Pacific Steam Navigation Company's Vessel Chili,
Arica, June 23rd, 1845.

SIR.—I do myself the pleasure of forwarding, for insertion in the *Nautical*, the following remarkable circumstance of a vessel being reported, by a Cape pigeon, nine days before her arrival at this port; I have minutely investigated the facts, and, however, extraordinary they may appear, they are no more strange than true.

On the 25th of May last, Capt. Farley, of the Ann Baldwin, lying in the port of Iquique, (105 miles to the southward of this,) observed a Cape pigeon flying about the bay with a piece of wood dangling from its neck, and sent the mate after it, who succeeded in capturing it by a blow

with an oar without killing it, and having taken off the piece of wood, of which the following is a fac-simile, the bird was set at liberty again in conformity with the request written on the billet.



On the reverse side.—"*Allow the bearer to pass, May* 1845."

Capt. Farley in writing to his consignees at this port mentioned the circumstance, not knowing that the Camana was actually bound to Arica, and Capt. Hoodless, as may be supposed was much astonished to find on his arrival nine days after the pigeon, that the messenger had taken so happy a direction in its flight. The piece of wood was given to me in Iquique to take down to Arica, and Capt. H. immediately recognized it as the same which he had fastened to the neck of a Cape pigeon off Cape Horn on the 5th of May, an entry of the circumstance having been made in the ship's log on that day by the mate. The inscriptions were etched in with a fork to the soft fir, and afterwards inked over so that they had not suffered in the least from exposure to the weather. I believe it is Captain Farley's intention to present this interesting billet to the Naval and Military Museum, it is a pity that the bird itself does not accompany it, although, doubtless, there will be specimens in the Museum to suspend it to.

I should strongly recommend to all commanders of vessels this practice of billetting Cape pigeons; from the parallels of 25° to 60° south they abound, and may be caught at any hour of the day or night required, by simply towing a piece of twine with a cork at the end of it, in which they entangle their wings, and it would only be an amusement to dispatch one every day at noon, with the ship's position, &c., as by this simple means vessels could be reported; for the birds, although encumbered still follow in the tracks or wakes of vessels they meet with. I have seen more than one with a frill of red flannel round its neck, following the vessel I was on board of, although it had not been put on by any of our crew.

In a calm they may be caught by hand, by sprinkling a little fat over the side, in fact, by this mode you may single out any particular bird, for unlike any other of the feathered tribe, except the booby or penguin on shore, (or the former when roosting on the yards or rigging at night,) they will allow themselves to be captured two or three times consecutively, if not ill-treated. I remember an instance of this kind on board

this steamer in the port of Copiapo; a number of them had followed the vessel from off Valparaiso, and whilst at anchor some of the passengers amused themselves by catching these birds by hand off the accommodation-ladder, putting a piece of cloth like a poncho over their heads and letting them go again; but, on sprinkling more fat over the side they still came back, and were caught a second time. They appear to have no fear, and on being taken merely utter a croaking sound like a young raven, and discharge from their beaks about a teaspoonful of clear oil.

The Cape Pigeon is a very pretty bird; it is mottled, black and white on the back in bands, the black spot being oval, all under the belly and wings it is white, the head and legs black. There is another variety of an ash colour, without spots. They much resemble the common pigeon, but are not so large; they fly very swiftly without any apparent exertion, and seem never to tire, for whatever rate a vessel is sailing or steaming at, they fly across and across the wake, and follow day and night for hundreds of leagues. I have never met them north of the line.

I remain, &c.,

GEO. PEACOCK,

To the Editor, &c. *Marine Superintendent.*

LATEST INTELLIGENCE FROM THE POLAR SHIPS.

Extract of a Letter from H.M.S. Erebus, Lat. 68° N., *July 1st*, 1845.

THE fair wind that blew us from our friends the steamers, did not last long, and we had one continued succession of westerly and north westerly winds (relieved now and then by a fair wind for a day) till the 21st June, when we found ourselves 134 miles due east of Cape Farewell. Here we had a calm with a most tremendous swell, in which we *did roll*. During our journey thus far we went within 60 or 70 miles of your old friend Iceland, but it was too cloudy to see Mount Hecla.

We did not go within 70 miles of Cape Farewell, but rounded it with a gale right aft, which followed us round, with a heavy sea; we kept close reefed top-sails and reefed fore-sail, and made the old craft go 8 knots through it. We lost no time I assure you, the only difficulty I had was to make Sir John shorten sail when it was necessary. He is all life and energy, with good judgment and a capital memory, one of the best I know, his conversation is delightful and most instructive, and of all men he is the most fitted for the command of an enterprise requiring sound judgment and great perseverance. I have learnt much from him, and consider myself most fortunate in being with such a man, and he is full of benevolence and kindness withal.

We had the usual allowance of rain and squalls (and heavy ones too), shipped a few seas, one or two down in our mess, but satisfied ourselves that the Erebus is very easy, though now and then we did kick and plunge most terribly; we were all in good humour, in fact there is one incessant laugh from morning till night; we are most comfortable and happy, plenty to do, observing all sorts of things all day, and eating good dinners into the bargain.

On Sunday 22nd we were due south of Farewell, on the 24th we flattered ourselves we were in Davis' Straits being in lat. 59° 36', for a bright gleam of sunshine enabled us to get this and dry ourselves and our clothes. We worked for Cape Desolation which sounds Polar enough, and we bounded

along merrily shaking hands with ourselves and making imaginary short cuts through America to the Pacific. The thermometer has scarcely varied 3° for three weeks, being at about 43°.

On 25th we saw our first *iceberg inshore*, the beautiful sharp craggy snowy coast of Greenland in sight an immense distance off, and a thing like a rock sticking up ten miles off, which might have been an ice-berg for aught I could tell. This was at 2 o'clock in the morning, the sun just rising, the sea smooth, the air clear. Read, our ice-master always told us we should see no ice down here "barring the ice-bergs" which are nothing.

Since then we have had delightful smooth seas, sometimes calm, sometimes foul, wind light, and much fair wind; for the last few days we have been nearer the land, and yesterday were catching cod near a most glorious assemblage of ice, rock, snow, and clouds, being about thirty miles from the coast, about Liehtenfel.

To-day we have had a noble breeze right aft with a strong current in our favour. A most splendid semi-circle of icebergs appear ahead, and under the land we count 65 from the "Crow's Nest"; but we don't care for we know they are all aground. I always fancied an iceberg was a great transparent looking lump of ice, instead of a beautiful twelfth cake looking thing as it is, odd shapes enough however some of them.

I have just been on deck looking at one about 200 feet high, which came down with a crash and raised a mist like an avalanche. It is now 12 o'clock though the sun is up, so I shall go to bed and finish this to-morrow, but it is a pity to sleep on such a fine clear sun-shiny night.

July 22nd, soon after midnight it came on to rain hard and the breeze freshened, we got in amongst ice-bergs, and saw about 180 before morning, when we stood in and found ourselves in the forenoon close under the rugged high land of Disko covered with masses of cloud, and its ravines filled with snow. We were in fact close to the settlement called Lievely, and showed our colours to a Danish flag hoisted on a low point. The day has been tolerably miserable, raining hard, thermometer up to 42°, smooth water; and we have had to beat up towards the Whale Fish islands, which are in the bay to the southward of Disko.

The scenery of Disko is grand in the extreme, and well worth the trouble of coming to see, and the beautiful ice-bergs in bold relief, against the dark almost black looking coast, present an extraordinary appearance. We shall not get into our berth in the Whale islands before to-morrow.

Whale Islands, July 18th.

We lost the whole of the 3rd by some unlucky mistake. We mistook the locality of the Whale islands (having two charts, one of which was wrong and the other not too right) and we went right up the bay to the mouth of the Waigaut, sailing in the most delightful smooth water, among ice-bergs of the largest size. The altitude at noon showed us we were wrong and we went back, reaching our anchorage at three o'clock in the morning of the 4th. Fortunately we had a breeze right round the bay, and as this is the only day we have lost since we sailed we must set it down to unavoidable accident and nothing else. The master of the transport says he never saw vessels carry so much sail as we did. Mr. Griffiths (the agent) is a very intelligent well read man. This is the snugest of all possible harbours, we are lashed alongside the transport, moored head and stern, and the *Terror* close outside us.

They have the smallest possible canoes here, into one of which I was determined to get last night, so got my trousers off and paddled about for some ·ne but at last over I went, head downwards, where I remained till rescued.

r observatories where I have passed most of my time are on Boat Island, we have had the most heavenly weather here I ever saw, clear, calm,) a hot sun and ice-bergs glistening in all directions. Fairholme Hodgson *I* counted 280 from the top of a hill the other night, and big mosquitoes ng us all the time.

The work of clearing the Transport has been a heavy one, we reckoned on doing it in two or three days at most, but though we have worked from 4 A.M. to 6 P.M. hard, we shall only finish this evening, and hope to swing the ship to-morrow and sail next morning, the 12th, rather late, but we can't help it, and if we have a good breeze and open sea to Lancaster Sound shall be there before the 1st of August. This will give us plenty of time, but we must remember that Parry was 54 days doing it on one occasion. However we shall start with three years provisions and *the Engine*. You have no conception how happy we all are.

We hear that this is to be a remarkably clear season, but have had as yet no good authentic intelligence. However clear or not clear, we must go ahead, and if we don't get through, it won't be our fault. I can see however that even if there be a good passage, it is a perfect lottery what sort of season we have, and whether we happen to be at the particular spots at the most favourable moments.

Crozier, is a most indefatigable man and a good observer, just suited for his position. And now you have us as far as Disko, and by the time you get this we shall I trust be well into our work.—11th July, Wind N.E., weather quite hot.

[The foregoing enables us to follow the Expedition to the 11th of July; on the following day they were to leave Disko. Since its receipt the Eagle Whaler, Capt. Straiton has arrived in the London Docks, and we have been favoured with further information of the ships after their leaving Disko.]

"On the 19th July, Noon, in lat. 72° 45′ long. 58° saw two barques no doubt the Discovery Ships, steering a course E.N.E. which allowing for the variation would be making westing, and unquestionably in my opinion they would meet with no interruption from ice to Lancaster Sound. They passed Pernawick Island about 10 to 15 miles off, and not a bit of ice to be seen from the highest part of the land, the clearest day we had, very clear. The Eagle was no higher up the Straits than Pernawick, which is in 73° lat. and it was while there we saw the ships. The other two schooners which came out and joined the Eagle fell in with the Transport on her return home, but heard nothing farther than above stated regarding the ships.

"D. HALKET."

BRITISH ASSOCIATION.—*Cambridge, June 18th*, 1845.

(Continued from p. 491.)

OUR limits prevent us from following Sir John Herschel throughout his lengthened but interesting address to the British Association, but there are some subjects on which he touched and which more intimately concern our naval readers that we cannot omit. We shall, therefore, conclude with these, and may in our next make some extracts from the proceedings of the last meeting relating to subjects which immediately concern our readers.

Speaking of magnetic observatories, which the Association has recommended the continuance of for another period of three years, Sir John said:— "A ship is an itinerant observatory; and, in spite of its instability, one which enjoys several eminent advantages—in the uniform level and nature of the surface, which eliminate a multitude of causes of disturbances and uncertainty, to which land observations are liable. The exceeding precision with which magnetic observations can be made at sea, has been abundantly proved in the Antarctic Voyage of Sir James Ross, by which an invaluable mass of data has been thus secured to science. That voyage has also conferred another and most important accession to our knowledge in the striking discovery of a *permanently* low barometric pressure in high south latitudes over *the whole Antarctic ocean*—a pressure actually inferior by considerably more

than an inch of mercury, to what is found between the tropics. A fact so novel and remarkable will of course give rise to a variety of speculations as to its cause; and I anticipate one of the most interesting discussions which have ever taken place in our Physical Section, should that great circumnavigator favour us, as I hope he will, with a vivâ voce account of it. The voyage now happily commenced under the most favourable auspicies for the further prosecution of our Arctic discoveries under Sir John Franklin, will bring to the test of direct experiment a mode of accounting for this extraordinary phenomenon thrown out by Colonel Sabine, which, if realized, will necessitate a complete revision of our whole system of barometric observation in high latitudes, and a total reconstruction of all our knowledge of the laws of pressure in regions where excessive cold prevails. This, with the magnetic survey of the Arctic seas, and the not improbable solution of the great geographical problem which forms the chief object of the expedition, will furnish a sufficient answer to those, if any there be, who regard such voyages as useless. Let us hope and pray, that it may please Providence to shield him and his brave companions from the many dangers of their enterprize, and restore them in health and honour to their country.

"The last year must ever be considered an epoch in Astronomy, from its having witnessed the successful completion of the Earl of Rosse's six-feet reflector—an achievement of such magnitude, both in itself as a means of discovery, and in respect of the difficulties to be surmounted in its construction, (difficulties which perhaps few persons here present are better able from experience to appreciate than myself,) that I want words to express my admiration of it. I have not myself been so fortunate as to have witnessed its performance, but from what its noble constructor has himself informed me of its effects on one particular nebula, with whose appearance in powerful telescopes I am familiar, I am prepared for any statement which may be made of its optical capacity. What may be the effect of so enormous a power in adding to our knowledge of our own immediate neighbours in the universe, it is of course impossible to conjecture; but for my own part I cannot help contemplating, as one of the grand fields open for discovery with such an instrument, those marvellous and mysterious bodies or systems of bodies, the nebulæ. By far the major part, probably, at least, nine-tenths of the nebulous contents of the heavens consist of nebulæ of spherical or eliptical forms, presenting every variety of elongation and central condensation. Of these a great number have been resolved into distinct stars, and a vast multitude more have been found to present that mottled appearance which renders it almost a matter of certainty that an increase of optical power would show them to be similarly composed. A not unnatural or unfair induction would therefore seem to be, that those which resist such resolution, do so only, in consequence of the smallness and closeness of the stars of which they consist; that, in short, they are only optically and not physically nebulous. There is, however, one circumstance which deserves especial remark, and which, now that my own observation has extended to the nebulæ of both hemispheres, I feel able to announce with confidence as a general law, viz., that the character of easy resolvability into separate and distinct stars, is almost entirely confined to nebulæ, deviating but little from the spherical form; while, on the other hand, very eliptic nebulæ, even large and bright ones, offer much greater difficulty in this respect. The cause of this difference must, of course, be conjectural, but, I believe, it is not possible for any one to review *seriatim* the nebulous contents of the heavens, without being satisfied of its reality as a physical character. Possibly the limits of the conditions of dynamical stability on a spherical cluster, may be compatible with less numerous and comparatively larger individual constituents than in an eliptic one. Be that as *it may*, though there is no doubt a great number of eliptic nebulæ in which *stars have not* yet been noticed, yet there are so many in which they *have*, the gradation is so insensible from the most perfectly spherical to the

most elongated elliptical form, that the force of the general induction is hardly weakened by this peculiarity; and for my own part I should have little hesitation in admitting all nebulæ of this class to be, in fact, congeries of stars.

"And this seems to have been my father's opinion of their constitution, with the exception of certain very peculiar looking objects, respecting whose nature all opinion must for the present be suspended. Now, among all the wonders which the heavens present to our contemplation, there is none more astonishing than such close compacted families or communities of stars, forming systems either insulated from all others, or in binary connexion, as double clusters whose confines intermix, and consisting of individual stars nearly equal in apparent magnitude, and crowded together in such multitudes as to defy all attempts to count or even to estimate their numbers. What are these mysterious families? Under what dynamical conditions do they subsist? Is it conceivable that they can exist at all, and endure under the Newtonion law of gravitation without perpetual collisions? And, if so, what a problem of unimaginable complexity is presented by such a system if we should attempt to dive into its perturbations and its conditions of stability by the feeble aid of our analysis. The existence of a luminous matter, not congregated into massive bodies in the nature of stars, but disseminated through vast regions of space in a vaporous or cloud-like state, undergoing, or awaiting the slow process of aggregation into masses by the power of gravitation, was originally suggested to the late Sir W. Herschel in his reviews of the nebulæ, by those extraordinary objects which his researches disclosed, which exhibit no regularity of outline, no systematic gradation of brightness, but of which the wisps and curls of a cirrus cloud afford a not inapt description. The wildest imagination can conceive nothing more capricious than their forms, which in many instances seem totally devoid of plan as much so as real clouds,—in others they offer traces of a regularity hardly less uncouth and characterestic, and which in some cases seems to indicate a cellular, in others a sheeted structure complicated in folds as if agitated by internal winds.

"Should the powers of an instrument such as Lord Rosse's succeed in resolving these also into stars, and, moreover, in demonstrating the starry nature of the regular elliptic nebulæ, which have hitherto resisted such decomposition, the idea of a *nebulous matter*, in the nature of a shining fluid, or condensible gas, must, of course, cease to rest on any support derived from actual observation in the sidereal heavens, whatever countenance it may still receive in the minds of cosmogonists from the tails and atmospheres of comets, and the zodiacal light in our own system. But though all idea of its being ever given to mortal eye, to view aught that can be regarded as an outstanding portion of primæval chaos, be dissipated, it will by no means have been even then demonstrated that among those stars, so confusedly scattered, no aggregating powers are in action, tending to draw them into groups and insulate them from neighbouring groups; and, speaking from my own impressions, I should say that, in the structure of the Megallanic Clouds, it is really difficult not to believe we see distinct evidences of the exercise of such a power. This part of my father's general views of the construction of the heavens, therefore, being entirely distinct from what has of late been called 'the nebulous hypothesis,' will still subsist as a matter of rational and philosophical speculation,—and perhaps all the better for being separated from the other."

Tidal Harbours Commission.

(*First Report of H. M. Commissioners*

The various points of inquiry to which our
structions given to us for our guidance may
four heads, viz.;—

First.—As to what changes have taken place in any of those tidal harbours or navigable rivers.

What encroachments have been made upon them; by whom and by what authority so made; and the effect that such encroachments have produced or may hereafter produce.

What injury may have been done to those harbours and rivers, or may accrue to them by neglect, or by the unauthorized removal of shingle or other materials from their shores, or by the improper discharge of ballast, or by the drainage of mines, or by the diversion of their tides or streams.

Secondly.—What measures are necessary as well to abate any of the said injuries as to prevent any future mischief.

Whether there are sufficient legal powers for enforcing such remedy, and if not what further powers are necessary.

Thirdly.—To inquire into the state of the law as regards the powers of the Lords Commissioners of the Admiralty for the conservation of all the harbours, shores, and rivers of the United Kingdom.

How far the powers conceded to particular authorities or persons, by Charter or by Royal Grant, or by Act of Parliament, may be held to supersede or to interfere with the jurisdiction of the Admiralty.

Whether any, and what, Legislative measures are necessary to give the Lords Commissioners of the Admiralty sufficient powers to remove any present or future encroachments, and to prevent the construction of any works which may have an injurious effect on any harbour, shore, or navigable river.

Lastly.—To inquire what measures it may be expedient to adopt for the general improvement of the harbours and rivers of the United Kingdom.

We entered on these several points of inquiry with a full sense of their deep importance, not only as involving the general benefit of the public and the protection of our commerce, but also the welfare of a large class of Your Majesty's most valuable subjects, the merchant seamen of this great maritime empire; and it is our earnest hope that we may be enabled to point out simple and efficacious means whereby our tidal harbours may be rendered more available to the prosperity of our commerce and more accessible in the hour of need.

The labours of the Commission have been anticipated, in some measure, by the Orders of the House of Commons on the 22nd July and 9th August last; in compliance with which Returns have been received from 260 harbours and havens governed by Act of Parliament, Charters, &c., comprising a mass of valuable information respecting the tidal harbours and navigable rivers of the kingdom, which will require much time to examine carefully, and to form a digest of them. But having in an early stage of our Inquiry become deeply impressed with the necessity of some Legislative measure to be taken with as little delay as possible to remedy the injuries which have already taken place (and are daily increasing) to the navigation of many of the tidal harbours throughout the United Kingdom, we determined to confine our inquiries in the first instance to a few specific cases bearing directly on that general question.

We have therefore selected, as examples, the rivers Clyde and Tay, and the harbour of Montrose, in Scotland; together with Southwold, Harwich, and Rye, in England; and we find that very great and increasing injury to the best interests of the country has accrued from negligence of the several authorities in permitting the improper removal of soil and beach, as well as by embankments, weirs, and other obstructions of a similar nature which check the free flow of the tide, impair its strength, and thus permanently diminish the general depth of the river. And, on the other hand, that when the aid of experience and science has been called in, and a due vigilance has been exercised, a proportionate improvement has invariably been the result.

The River Clyde and Harbour of Glasgow.

The river Clyde offers an instructive example of what enterprise and persevering efforts will accomplish, but at the same time a proof that even such efforts require to be controlled by some competent and disinterested authority.

This noble river, traversing a large part of the western lowlands—the third Scottish stream in point of magnitude, but the first in commercial importance—drains an area of 1200 square miles, or a twenty-fifth part of the whole of Scotland.

From the reports of the Engineers Smeaton, Golborne, and Watt, it appears that, about 90 years since, the navigation of this river, as well as the flow of the tide, was so much obstructed by sand-banks, that barges drawing 3 feet water could alone be employed in the trade of the important city of Glasgow; that its manufactures were necessarily carried down to Port Glasgow or Greenock in order to be shipped for exportation; and its imports, in the same manner, were transhipped into barges to be brought to the city. At this time the rise of spring tides at Hirst Sand, a litttle below Glasgow, was only 1 foot 9 inches, and the total depth at high-water spring tides was but 3 feet 3 inches. So hopeless did the case seem, that in 1755 Smeaton proposed a lock across the river at Marling Ford, about four miles below the city, so as to form the upper part of the river into a canal; and for this an Act of Parliament was actually obtained. Happily, however, for the commercial interests of Glasgow, Golborne, in 1768, took a different view of the capabilities of the river, and recommended the contraction of the channel and the free use of the dredge. These means having been adopted, and perseveringly employed by subsequent engineers, the result is that at this moment there is a depth of 17 feet at high-water at Glasgow Quay, and that large ships now embark and unload their cargoes where formerly a laden barge could barely swim.

In 1844 the number of arrivals was 13,919 vessels of 1,101,949 tons.

And there are now 60 steam-vessels belonging to the port; as well as 940 arrivals and sailings annually of traders, not one of which, at the former period, could have approached nearer than Dumbuck Ford, 12 miles below the city.

These are great improvements, and highly honourable to the spirit and enterprise of this city, yet it must be remembered that such results have been obtained at a vast sacrifice of money levied by heavy dues upon shipping, which nothing but great commercial prosperity could have borne.

In 1770 the gross harbour dues for the year were	£147
In 1841 " "	50,292
And the total receipts since the year 1770 exceed	800,000

But engineering skill being not only slow in its developement, but having often to struggle with prejudice and self-interest, it has now been discovered that many of the plans of the Clyde Trustees were short-sighted; that in order to continue their improvements in deepening their river, they must now submit to a large outlay for rebuilding bridges, the foundations of which were not laid deep enough; that weirs have been permitted across the river, nay, sanctioned by Act of Parliament, so as to prevent the flow of the tide above the city, and stop all navigation above the bridges; that a considerable expense for dredging might have been saved if the natural flow of the tidal water had been properly directed; the harbour space might have been enlarged, and the general depth of water throughout the and that, with all these improvements, the dues on s d. and the ports of Greenock and Port G have been spared a large expend expectation of traffic which it is

The River Tay.

The river Tay is the largest of all the Scottish streams; its extreme length being about 180 miles, draining an area of 2300 square miles, and pouring more water into the ocean than any other river of Great Britain. In point of commercial consequence, it is inferior to the Clyde; but the rapid strides made by Dundee within the last ten years, and the increase in the shipping at Newburgh and Perth, make the preservation of this river a subject of great importance, and render it the more necessary to show how much it had suffered while it was abandoned, and how satisfactory have been the results since improvements began.

Down to the year 1834 the upper portion of the Tay, as far as navigation was concerned, seems to have been entirely neglected. Landed property on each side of the stream, and the right of salmon fishing, seem to have been paramount to every other interest; jetties or dikes, in order to form new ground, were run out at pleasure; and large heaps of stone, called fishing cairns, were erected at will in the bed of the stream; while, below, only a single fairway buoy was placed to mark the entrance between two dangerous sands at the mouth of the river. The Perth Commissioners at length became alive to the mischief of neglect; a strong report from their engineer on the shameful state of the river and on its capabilities roused them to activity, and in 1834 a Bill was obtained to empower them to raise money for its improvement. During the next five years the process of deepening the bed and straightening the channel of the river was steadily continued, and by thus affording a free passage to the tidal waters a depth of 15 feet at high-water of spring tides has been obtained near the city, and the flood tide now begins to flow three-quarters of an hour earlier than formerly at Perth bridge.

The value of such unrestrained action to the tidal waters seems not to be confined alone to the upper channel of the river, for according to the report of the Admiralty surveyor, it has caused an increase of depth at the Tay Bar, and dispersed a large quantity of the sand which had there accumulated. The signal success of these efforts in the Tay as well as the Clyde, holds out great encouragement to persevere in deepening the channels in all our tidal rivers.

Nor have the trustees of Dundee Harbour shown less energy in keeping pace with the extension of manufactures in their town; by the establishment of suitable docks and basins they have raised it to be a first-class commercial port; and by their judicious enterprise during the last thirty years they have more than quadrupled the number of its shipping as well as the amount of its revenue.

In June, 1815, the total revenue of the port was		£4,096
In June, 1844,	„	23,895;

while the number of vessels had increased to 3791, having a burthen of 272,239 tons.

The Tay is however susceptible of much further improvement; there are still many obstructions in the bed of the river to be removed; dangerous rocks near the entrance of the inner harbour at Dundee are yet to be blasted; and a recent attempt, to grasp an area of about 2000 acres below high-water mark, near Powgavie, on the north shore, has to be frustrated. In short, here as elsewhere, the watchful eye of a permanent conservative guardianship is absolutely required in order to preserve this fine river for its daily increasing trade.

Montrose.

At Montrose we find a similar instance of encroachment on the banks of the South Esk, where the proprietor of the adjoining land even questioned the authority of the Admiralty to oblige him to restore to the harbour of the tidal water of which it appears it has been deprived by his em[illegible]

ments. The Montrose Trustees having, with much public spirit, recently expended the large sum of £42,000. in constructing a wet dock and in improving their harbour, have not the means of contesting with a wealthy proprietor, the point at issue, and therefore naturally look to the Admiralty for protection. But as this case is now in course of legal process by the Lord Advocate of Scotland, we abstain from further comment.

Arbroath.

Arbroath, a port on the east coast of Scotland, about halfway between Montrose and the river Tay, and the seat of extensive manufactures, falls under a different head of inquiry from the harbours we have hitherto examined into, but is not the less, we conceive, within the limit of our instructions.

The evidence laid before the Commission evinces an extent of public spirit on the part of the inhabitants and trustees of this burgh in the highest degree deserving encouragement. Seven years ago the harbour was the property of the Corporation, and its revenues were applied in lighting, paving and cleansing the streets. The harbour was insufficient for the shipping belonging to the place, and unfit for the reception of vessels of any considerable size. But in the year 1838 the inhabitants voluntarily came forward and taxed themselves in order to pay those municipal expenses; and an Act of Parliament, in 1839, having empowered the trustees to raise money, a sum of not less than £58,000 has been since that time expended in works for enlarging and improving the port, whereby the accommodation for shipping is more than doubled.

In 1746 the shore dues amounted to			£21
In 1823	„	„	616
In 1843	„	„	3050

showing, since the internal improvements of the port, a rapid increase in the amount of traffic.

But the estimated expense of executing those works, as in nearly all similar cases, has proved too small. As far as they have been carried out they are constructed with deep foundations, and are of a substantial and stable character. But the deepening of the harbour, with its entrance and approaches, is still unfinished; and having exhausted all their resources, the trustees have memorialized Your Majesty's Government for a small grant, to enable them to complete the projected works; without which, what has been done will be in a great measure unavailable.

The works proposed, it appears in evidence, would give a mean depth of 16 feet at high-water of ordinary spring tides,—they would render Arbroath a tidal harbour of refuge, for 12 hours out of the 24, for all vessels of the size which usually frequent that coast; and they would thus be as great a benefit to the public as to their enterprising owners; for the greater part of that rocky coast, when it becomes a lee-shore, is extremely dangerous, as was too fatally proved in the gale of January, 1800, when 40 vessels were wrecked, and 13 of them within a few miles of Arbroath.

Taking all the above-mentioned circumstances into consideration, it appears to the Commission that this case comes so distinctly under the fourth head of inquiry pointed out to us by our instructions, that if in any instance Your Majesty's Government should be disposed to aid the local exertions of the trustees of a harbour, this case seems deserving of encouragement, and we therefore humbly beg leave to recommend to Your Majesty the prayer of the Trustees of the Harbour of Arbroath.

(To be continued.)

H.M. Steamer Porcupine.—We think it due to Captain Bullock, R.N. and the officers and crew of the *Porcupine*, to make known as generally as we can the services rendered by them to the schooner Providence of Truro. It appears that this vessel when leaving Ramsgate, on the 17th inst., was driven ashore by the tide at the back of the pier, where from the heavy sea then running she would have sustained very serious damage had not Captain Bullock at once proceeded with the *Porcupine* to her assistance, and hauled her off with little damage beyond the jib-boom. Capt. B. with great liberality declined to receive any remuneration for this important service. The owners of the vessel (The Truro Shipping Company) have expressed to Capt. Bullock, we understand, the great obligation they are under to him for his assistance.—*Shipping Gazette.*

Wrecks of British Shipping.

Continued from p. 327.—cs. crew saved; cd. crew drowned.

VESSELS' NAMES.		BELONG TO.	MASTERS.	FROM.	TO	WRECKED.	WHEN.
Adeline	177						June 13.
Alice Jane						Saldana B.	May 16.
Alpha			Cuthburtn	Shields	London	Shoreham S	May 20,
Bertha	180		Cuthburtn	Westport	Liverpool	Arranmere I	Mar. 5 cs
Bolina		Sunderland				Winterton	Mar. cs
Briton		Glasgow		Sydney	Calcutta	Andaman I.	Nov. cs
British Queen		Newf'dland				P. Edward I	June 14
Clara		Brixham	Windsor	Carmarthen	Swansea	Off Mumbles	July 7 cs
Coquette	185	Quebec	Henry	Quebec	Glasgow	Magdalen I.	June 8.
Dalkeith			McFaraln	Glasgow	Ft William	M. Cantyre	July 5 cs
Dandon		Sunderland	Price	Sunderland	Amsterdam	Texel	July 9 cs
Dawden							July 12
Edward			Redhead	Hartlepool	London	Yarmouth	May 12
Elbe	190	Sunderland	Craggs		Onega	White Sea	July
Ellen			Sullvan			Tabasca	Mar. 15.
Eve						Saldana B.	May 17.
Hypolita		Halifax					
I. P. Dobree			Hawkins	Liverpool	Jamaica	La Folle Rf.	April 6
James	195	Nassau	Ray	Nassau	Demerara	Little I.	Feb. 5 cs
Jane Gray						W. Falkland	Jan. 15.
Mary		Plymouth	Sawyer	Plymouth	Newport	Off Padstow	July 13
Mary		Belfast	McInley	Ballyshanon	Runcorn	Off Copelnd	Feb. 21 cs
Mary					B. Ayres	Ortiz Bank	May 10
Mellish	200		Fawcet	China	London	Paracels	Oct. 5 cs
Napier		Newcastle	Johnson	Marseilles	Gloucester	Coast Spain	Nov. 7 cs
Neptune			Braithwte	Bombay	China	Bouyrata	Feb. 27 cs
Peace		Faversham	Bedwell	Antwerp	Alexandria	C. Holland	July 20 cs
Philip		London		London	Valparaiso	Bonavista	Marco.
Premier	905			China		P. Banjang	July 25 cs
Priam			Moubray	Belize	London	P. Banjang	April 5 cs
Runnymede			Doultry			Cozumel	Nov. 12 cs
Rosebank						Andman I.	
Search	210	Yarmouth	Norton			Off Tees	Mar. 3 cs

177—Went down eastward of the Banks.—The barque Mary spoke off C. Ray with her passengers.
178—Parted her anchors and went to pieces.
188—Wreck washed on shore abandoned at Terchelling, coal laden.
193—Wreck boarded June 27th by Ambassador for Maranham,
209—Barque lost on Scatterie Island, crew and passengers saved by the Mary, Townsend, and landed at Quebec.

173—Thomas and Mary—in last No.—Lost in the ice, master and crew took to boat with one day's provisions, and a bag of bread on which they subsisted for ten days, when they were picked up by the Swift, Costello, and landed at St. John's, Newfoundland.
176—Uruguay—Crew in three boats made for I. Mary, C. Verds, on the third day were picked up by the brig Benin, bound to Africa, transferred to H.M.S. Rapid and landed at Plymouth; crew and captain lost everything.

VESSELS' NAMES.		BELONG TO,	MASTERS.	FROM.	TO.	WRECKED.	WHEN.
Ann Bell	211	Coals	Brig			Shipway	Aug. 21, cs
Aquatic		Hull	Corlyon	Hamburg	Hull	Helgoland	Aug. 20, cs
Arno		S. Shields				abandoned	Aug. 20, cs
Centenary		Sunderland	Douglas	Sunderland	London	off Dudgeon	Aug. 22, cs
Clara	215	Sunderland				foundered	Aug.
Cybele		Scarboro'	Harrison	Newcastle	London	off Dudgeon	Aug. 23, cs
Eveline		Maryport					
Experiment			Scantlebry	Fowey	Newport	off Lundy	Aug. 20, cs
Felix			Lead	Warkworth	London	at Sea	cs
Friendship	220	Exeter	Kerswell	Hull	Bristol	Portishead	Aug. 20, cs
Henry		Stockton	Ruddock	Stockton		Filey	Aug, 19, cs
Hope		London					
Industry			McDermot			Country HL	July 16, cs
Lancer		Sunderland		St John NB	Stockton	abandoned	Aug. cs
Lark	225	Whitehaven		Dublin		St. Bee's Hd.	Aug. 27, cs
Leith		Dunbar	Davey			at Sea	Aug. 20, cs
London			Wright	Whitby	Portsmouth	foundered	Aug. 7, cs
Mary		Maryport	Hurst	Dublin		St. Bee's Hd.	Aug. 21, cs
Mary Grieves		N. Shields	run	foul	of	foundered	July cs
New Eagle	230	N. Shields	Atkinson			foundered	Aug. 20, cs
Patriot		Jersey	James				July 4, cs
Regina		Whitehorn	M'William			Whaligoe	Aug. 20, cs
Reward			Antony	Plymouth	Swansea	Seven Stones	July 23, cs
Samuel and Sarah		S. Shields	Scotland			Brown Bank	Aug.
Sapphire	235	Newcastle	Hall		Quebec	C. North	May 18, cs
Sovereign			Roope	Lowestoft	Goole	at Sea	Aug. 20, cs
Vanguard		Whitby	Rose	Whitby		St. Paul's I.	May 18, cs
William			Dobson	Seaham	London	Smith's knll	Aug. 20, cs
Wreath	239	Glasgow				COrlogmess	Aug. cs

214—Abandoned by Master and crew, who were taken on board the Kingston by Sea of Shoreham. Also Master and crew of Cybele in a sinking state, taken off by brig Elizabeth and Sarah, both landed at Margate.
215—Foundered off the Leman Sand.
217—Foundered at Sea on 24th of June. Crew and 150 passengers (suppose) Emigrants taken to Quebec by the Stadacorea.
218—Sprung a leak and foundered off the island.
219—Sprung a leak at Sea and crew landed Aug. 23rd at North Shields from the Venus from off Flamboro Head.
222—Wreck seen in 46° and 30° on 9th of July by Ben Lomond.
224—Waterlogged in lat. 47° N., long. 49° W., crew brought home by Eliza Janet.
226—Crew saved by French schooner Creole, M. Paumier, and landed by a pilot-boat at the Humber.
231—Sprung a leak and foundered off C. Penas.
234—Crew landed at Great Yarmouth, Aug. 23rd.
236—Foundered in the night 20′ E.S.E. of Leman light-vessel, being leaky, crew promptly taken from her by the Sisters, Rose, of Ramsgate, and landed from the Good Intent, Wright, at Lowestoft.
239—Brig Acorn of Stockton, spoken with her crew on board at Archangel, Norway.

HURRICANES OF 1845.

THE following notices have been published of the occurrence of hurricanes this year.

On the 26th of February, the French Government brig, Calibri, foundered in a gale during the night, and all on board, with the exception of 7 men, perished; among these the commander, Captain Orcel.

The town of Holmstadt, in Norway, on the 21st of July, was visited by a tremendous hurricane, by which 20 buildings were thrown down, a number of trees torn up by the roots, and several persons wounded. The sea retired in an unusual manner from the coast, and returned in a few minutes with great violence. The waters of the Nisa rose all of a sudden 4 feet above their usual height, and then at once subsided. A similar phenomenon was witnessed on the coast at the time of the earthquake at Lisbon, in 1775, and of that at Messina in 1783. The state of the weather in England on that

day was calm and foggy,—a dull November's day. A storm occurred at Bermuda on 20th and 21st March last.

The Weather.—Whilst our last winter was very severe, almost of Arctic character, (the thermometer having been 40° below the freezing point,) in Iceland, on the Arctic circle, there was scarcely any winter, and the entire year very fine, as also the present summer, which, with us, has been the contrary: last month, for an extent of three miles, near Bangor, the ground was covered with snow three inches deep.

The Yachting Cruize from Harwich to Cork.

(Continued from p. 368.)

Well, what Yacht Clubs have we on the eastern coast—one, two, or three? Mashallah! as the Turks say, wonderful is the fact; the "Royal Eastern," now ten years old, still lives quietly enough at Edinburgh and Leith; the "Royal Yorkshire Yacht Club" has *not* yet sprung into existence at Hull; but further south it is gratifying to find that, with a growing strength and spirit, (worthy of the soil that bore a Nelson) our seaward counties have joined hand in hand and ensured the success of the yet young but emphatically "true-blue"

Royal Harwich Yacht Club.

Patron.—Her Most Gracious Majesty Adelaide the Queen Dowager.

Commodore, Captain J. N. Gladstone, R.N., M.P.—*Vice Commodore*, John Maryon Wilson, Esq., *Sabrina* yacht.—*Rear-Commodore*, William Knight, Esq., R.W.Y.C.—*Honorary Secretary*, W. J. Miall, Esq., Lloyd's Agent at Harwich.—*Treasurer*—E. Chapman, Esq.

Salutes.—The salute to the Rear-Commodore is seven guns; to the Vice-Commodore, eight guns; to the Commodore, nine guns (or eleven if convenient.) The Return Salute is six guns to any yacht not bearing a flag. For all further salutes *vide* the regulations of the Royal Navy.

Signals.—Captain Marryat's Code, edition 1844, has been adopted by the Royal Harwich Yacht Club. To make a yacht's number, hoist the Union Jack *between* Numerals, according to the subjoined list. Thus Union Jack between 7 and 6 indicates *Sabrina*. Should the Union Jack not be at hand, use the Club Jack or Club Burgee instead.

When a yacht speaks the *Club House*, she must hoist the Union Jack over Telegraph Flag (tricolor.) To speak the *Committee Vessel*, at Regattas, &c., hoist Blue Peter over Telegraph Flag. To speak the *whole fleet*, hoist Blue Peter over Union Jack. The Cypher Flag (0) when hoisted alone signifies "Disregard motions of Senior Officer but attend to his signals." The Rendezvous Flag (chequered) hoisted alone becomes the Preparative Flag and is hauled down or dipped at the exact moment any given manœuvre, &c., is to be commenced.

The Navy demand to show numbers is Union Jack above a Pendant quartered red and white.

Distinguishing Colors.—By Admiralty Warrant, the Royal Harwich Yacht Club are entitled to wear the Blue Ensign of the Royal Navy with a Lion, Rampant (*or*) in the field thereof. And also a triangular Blue Burgee with the same device, to which device the Rear-Commodore's Flag (swallow-tail) has no addition; but the Vice-Commodore's contains a crown also, and the Commodore's Flag two crowns *above the Lion Rampant.* The Club-jack is a square blue flag with a Lion Rampant.

Priviliges.—Permission to visit free of Port charges, the ports of Hamburg, Bremen, Lubec and Frankfort on the Maine; Portugal, Spain, France, Belgium, Holland, Denmark, Norway, Sweden, Prussia, &c. Liberty in England to make fast to the Admiralty and Coast Guard Buoys. There are other privileges which we have not space to enumerate.

Copies of the following list have been, this month, forwarded to the proper authorities in Foreign ports.

Signals.	Vessels.	Tons.		Owners.	Ports.
0—0	Admiralty Yacht	c	—	Earl of Haddington	London
0—1	Agnes	c	5	S. Billingsly	Harwich
0—3	Albatross	c	8	J. M. Clarke	Ipswich
0—5	Alpha	y	—	R. Nalborough	Harwich
0—7	Ariel	c	6	W. Moore	Woodbridge
1—1	Belvidere	c	25	Lord A. Paget M.P.	London
1—6	Chance	c	5	J. Horn	Ipswich
1—8	Crisis	c	6	Thomas Nunn	Harwich
1—9	Crusader	c	16	H. Hyde	London
2—0	Curlew	c	18	A. Cobbold	Ipswich
2—3	Elise	y	7	J. Hely	Ipswich
2—6	Exquisite	c	15	J. Wilkinson	London
2—8	Fairy	c	6	Robert Reeve	Woodbridge
3—0	Ferret	c	11	W. Walford	Portsmouth
3—2	Flower of Yarrow	c	183	Marq. Conyngham	Southton
3—5	Foam	c	7	E. W. Roberts	London
3—7	Garland	c	6	E. Chapman	Harwich
3—9	Gauntlet	c	59	A. Fountaine	Portsmouth
5—0	Lady Louisa	c	12	J. G. Moon	London
6—0	Pearl	c	130	Marq. of Anglesey	Southton
6—2	Phantom (*a*)	c	20	A. O. Wilkinson	London
6—3	Phantom (*b*)	c	10	J. W. Fradgeley	London
6—5	Prima Donna	c	26	J. Harvey	Colchester
7—0	Rival (*a*)	c	6	S. Stock	Woodbridge
7—1	Rival (*b*)	c	10	J. E. Parkinson	London
7—2	Rowena	c	6	J. Cardinall	Harwich
7—3	Royal Adelaide	c	5	W. J. Miall	Harwich
7—6	Sabrina (flag-yacht)	c	36	J. M. Wilson	London
7—7	Saucy Jack	c	35	J. Machin	London
7—8	Sea Flower	c	33	T. M. Gibson, M.P.	Southton
8—1	Star	c	5	H. Lawrence	Ipswich
8—3	Sylph	c	—	L. Cottingham	Harwich
8—5	Symmetry	c	7	C. Tovell	Harwich
8—6	Syren	c	6	B. Gall	Woodbridge
9—0	Transit	c	23	J. H. R. Knight	London
9—3	Trinity Yacht	c	—	Sir H. Pelly, Bart.	London
9—6	Triton	c	22	J. S. Christian	London
9—8	Victorine	c	18	H. G. Lord	London

From Landguard Fort (Suffolk side of the harbour) the Royal Harwich Yacht Club-house bears N.W. and by W., by Compass.—The Club-house is open daily for the reception of members throughout the year, commands a splendid sea-view, is well supplied with Newspapers and periodicals, and the members have decided on forming a large library and collecting together models of shipping, &c., for which objects numerous donations have already been made by different individuals of this rising association of yachtmen.

N.B.—The Annual Harwich Regatta is held in the month of July, before the yachts proceed to Cowes and Plymouth for the August Regattas.

In the *Supplement* to the above list, now in preparation, each yacht will make her number by hoisting the Union Jack *below* one or two numerals. In the

present list the Union Jack is placed *between* numerals. When the Union Jack appears *above* numerals it indicates an English man-of-war according to the list in Marryat's Code. We may here mention that as Captain Marryat has in no case made the Cypher Flag an *uppermost* flag (which he might have done with advantage, say to indicate Foreign men-of-war instead of preceding their numbers by "50") the Rear Commodore of the Harwich Club has prepared for the club a private chapter of manœuvres, evolutions, &c., &c., not to be found in Marryat, indicating these signals by using the Cypher flag uppermost, thus 00, 01, 02, 03, 04, 05, 06, 07, 08, 09, 010, 011, &c., &c. The three Pendants and Rendezvous and Vocabulary Flags, Blue Peter, Jack and Cypher Flag are also thrown into combination to indicate Divisions, Sub-divisions, Repeating Yachts, &c., when the Royal Harwich Yacht Club have their "field-days."

Fire at Egripo.—The Malta mail brings us accounts of a fire having broken out at Egripo, the ancient Chalcis, on the night of the 11th of August, which, but for the prompt and valuable assistance of Commander Graves, of the British Navy, and the officers and crew of H. M. ship Beacon, on surveying service at Egripo, would most probably have destroyed the whole of the houses within the fortress. The flames first manifested themselves in the house of the prison jailor, unknown to the unfortunate inmates, until the moment they were roused to flee for the salvation of their lives, resigning to the devouring element their stock of worldly effects. Nothing could exceed the promptitude with which the British tars (proverbial for their alacrity in succouring the distressed) repaired to the spot; the decision manifested by Captain Graves in ordering the pulling down of the contiguous wooden fabric, and the steadiness and orderly manner in which his commands were obeyed by the officers, seamen, and marines landed for the purpose, and but for whose exertions we should perhaps have to record the destruction of the entire town. Nor is it the first occasion they have rendered a similar service, for, though some years have passed, we perfectly remember recording their exertions, with a like success, at the Piræus, when they received the thanks of the Greek government, as they have on this occasion from the military authorities of the place.

The Agents of Messrs. Rundell and Bridge, of London, are sailing a brig of 150 tons, on the lake Chiquito in Peru, at an elevation of 18,000 feet above the sea level. This lake is 248 miles long, and 150 broad, and hitherto unfathomed in some parts.

Pirates.—A correspondent writes under date of 20th August, that three pirate boats having appeared in the neighbourhood of Eubœa, the Greek Government had applied to the Ministers of the allied Powers for assistance, and a French and an Australian steamer had sailed in pursuit of them.

Captain Robert Master of the Chance has been presented with an elegant piece of plate, the gift of Mr. Ahlers, jun. of Amsterdam, owner of the Dutch ship Hendrick, wrecked a short time ago on St. Paul rocks in the Atlantic, for his gallant conduct in rescuing a portion of that ship's crew from destruction.

The Merchant Seamen's Crimpage Bill.—*An Act for the Protection of Seamen entering on board Merchant Ships.*

The Boa of Trade may license Persons to procure Seamen for Merchant ed Ships.

Whereas the seamen of this kingdom have been for several years past subjected to grievous impositions, and great injustice by certain persons, who make to procure seamen to enter on board merchant ships, who have no

interest in the said ships: and whereas it is required that further protection should be afforded to seamen against the arts of such persons: be it enacted by the Queen's most excellent Majesty, by and with the advice and consent of the Lords spiritual and temporal, and Commons, in this present parliament assembled, and by the authority of the same, that from and after the first day of September next, the Lords of the Committee of her Majesty's Privy Council appointed for trade and foreign plantations shall be and they are hereby empowered to license such persons as they may deem to be requisite and fit, and who may be desirous to take out such licenses, to hire, engage, supply, or provide seamen to be entered on board merchant ships; and every such license shall be granted for such period, upon such terms and upon such security being given, and shall be revocable upon such conditions, as the Lords of the said Committee may at any time or times appoint.

Manner of granting and revoking License.

II. And be it enacted, that every such license shall be granted, and every revocation thereof shall be made, by minute or resolution of the lords of the said committee, and a copy of any such minute or resolution, certified and signed by one of the secretaries or assistant secretaries of the said committee, shall be received as evidence of such license or revocation, without further proof thereof.

Persons not duly Licensed, &c.

III. And be it enacted, that no person not licensed as aforesaid, or not being the owner, part owner, master, or person in charge of a merchant ship, or the ship's husband, shall hire, engage, supply, or provide a seaman to be entered on board any merchant ship; and no person, whether licensed or not, other than the owner, part owner, master, or person in charge of a merchant ship, or the ship's husband, shall demand or obtain the register ticket of any seaman for the purpose or under the pretence of engaging him on board of any merchant ship.

Seamen hired contrary to the Act.

IV. And be it enacted, that no owner, part owner, master, or person in charge of any merchant ship, or ship's husband, shall knowingly receive or accept to be entered on board the said ship any seaman who has been hired, engaged, supplied, or provided to be entered on board the said ship any seaman who has been hired, engaged, supplied, or provided to be entered on board thereof contrary to the provisions of this act.

Penalties.

V. And be it enacted, that every person guilty of any of the offences above described shall forfeit and pay for each and every seaman hired, engaged, supplied, or provided to be entered on board, and for every register ticket demanded or obtained contrary to the provisions of this act, or for every seaman knowingly received or accepted to be entered on board contrary to the provisions of this act, any sum of money not exceeding twenty pounds upon conviction thereof for each offence, although several seamen may be included in the same contract, or several tickets may be obtained or several seamen may be received or permitted to remain at the same time.

Unlicensed Persons.

VI. And be it enacted, that it shall be unlawful for any person to employ any unlicensed person or persons for the purpose of engaging or providing seamen to be entered on board merchant ships; and that any licensed person knowingly employing any unlicensed person for the purposes aforesaid shall forfeit and pay a sum not exceeding twenty pounds, and, in addition thereto, *shall forfeit and lose* his license.

Advanced Notices.

VII. And be it enacted, that the owner, part owner, master, or person in charge of any merchant ship, or ship's husband, shall not pay or advance, nor give any note in writing or otherwise in the nature of and purporting to be an advance note for any part of the wages of any seaman hired, engaged, supplied, or provided to be entered on board the said ship until six hours after the ship's articles have been duly signed by the said seaman on board the said ship, and by the master or owner of the said ship, and then only to the said seaman himself, unless such wages or advance of wages be paid in money, in which case the payment may be made to the said seaman himself, at any period most convenient after the signing of the said ship's articles as aforesaid; and all payment of wages contrary to the provisions of this act, shall be and are hereby declared to be null and void, and the amount thereof shall be recoverable by the said seaman as if they had not been paid or advanced.

(To be continued.)

THE EXPERIMENTAL SQUADRON.—Rear-Adm. Hyde Parker has resigned the command of the Squadron, which has been assumed, until further arrangements, by Adm. Sir H. Pigot, who transferred his flag to the *St. Vincent*, 120, and was saluted by the fleet with the usual honours. Adm. Parker has come on shore invalided, having been suffering from a severe attack of gout during the greater part of the cruize. Rear-Admiral Sir S. Pym, K.C.B., will assume the command in chief, and conduct the further experimental trial sailings.

COVE.—Last week a boat was lowered by the *Rattler*, steam-sloop, containing bags of letters for the Squadron. A sea, however, caught her and swamped her immediately on reaching the water, when the bags and crew were instantly engulfed; the bags were lost, and so would have been the crew but for the gallant assistance of Capt. Sir B. Walker, of the *Queen*, who, with Capts. Codrington and Locke, was near the spot, at the time in his gig, and saved them from perishing. This is the second time Sir Baldwin has been the means, under Providence, of saving men of the Squadron since it left Spithead.

BOTTLE PAPERS.

(No. 19b.)

The following was found at the west end of Madeira where it was taken out of a bottle on the 10th of August 1845, and handed to me by the boatmen who found it. (Signed) G. STODDART,

H. B. M. Consul.

"On board the brig Crusader, Capt. Loobalestrier, May 12, 1815, left the West India Docks April 29th and bound to Honduras. This is to certify that we are in lat. 39° 38′ N., long. 14° 51′ W., all in good health, after having experienced very severe weather across the Bay of Biscay."

[This is an interesting case, shewing a southerly drift in conformity with another in the track of which it starts.]

(No. 95a.)

A bottle containing a letter was picked up at the Caicos on the 23rd of June, and the letter forwarded to this office from Mr. Nathaniel Butterfield. It was written on board the ship Ruby, T. D. Allen, Commander, and put overboard 1st, of May, 1845, in lat. 16° 48′ long. 64° 4′ on his voyage from London, bound to Falmouth, Jamaica, having left Gravesend on the 19th of *March*. This will show the great rapidity and strength of the current, the bottle being found 54 days after date, it must have drifted at the rate of 10

miles per 24 hours, even if it came as direct as possible, and found immediately on its reaching the Caicos.

[The course of this bottle, which we may call 95*a* is N. 56° W., distance miles.]

(*No. 53a.*) *Harwich, August 5th*, 1845.

SIR.—The enclosed was given to me in Norway. It was picked up on the Island of Outsire near Stavenger, in Norway (or Udsire) on the 21st October last year. It was taken to the British Consul and others who would not trouble themselves about it. I believe the Udsire lies in about 59° 20′ N. latitude.

I am, &c.,

JOHN F. GROOM.

"Ship Normandie of New York and for New York 21 days from Newcastle England. All well on board. ALFRED P. SPALDING, *Commander.*

"Dei Gratia"

Lat. obs. 57° 05′ N., long. chron. 33° 12′ W. long. ☉ & ☾ 33° 05′ W., long D.R. 34° 00′ W., bar. 29·9, air 47°, water 48°, light N.W. airs. Sunday 14th of January, 1844, Deo Volente.

Strong breezes have prevailed but not heavy gales,
Hold fast on thyself! What though perils assail,
And thou stand alone in the pitiless gale,
Thou art Lord of one soul, thou art King of one realm
Which no strong arm can conquer, no wave overwhelm,
That shall last and grow brighter as nations decay,
That shall flourish, still young when the stars fade away,
If true to thyself—thou thyself dost control—
Oh, there is no empire so great as the Soul.

When bound west in winter time you must adopt as a motto that which is adopted on other occasions when great perseverance is needed "Aut Cæsar Aut Nullus."

Now sunk the sun from his aerial height
As over the shaded billows marked the night. 6. P.M.

Whoever finds this will please forward it to Commander Becher, R.N. Editor of the *Nautical Magazine*, London, or Andrew Livingstone, Liverpool, for the purpose of ascertaining the currents of the Ocean.

Done on board ship Normandie, 14th of January, 1844. And in the 68th year of the Republic of the United States of America.

God Save the Republic, Amen.

[The foregoing unique production we have preserved for the writer's satisfaction, of whom we may say *poeta nascitur non fit.*]

The direction which the bottle has taken coincides with Nos. 39, 53, and 88, and is about N. 85° E. 1300 miles.

(*No. 3b.*)

The following has been received from Mr. Fargher, editor of the *Mona's Herald*, respecting the missing packet-ship England:—

Douglas, Isle of Man, Sept. 18th, 1845.

"SIR,—A bottle was picked up on Tuesday evening last, about four miles south-east of Douglas Head, by the fishing lugger Kite, Morrison, containing a piece of paper, on which was written in pencil—"Packet-ship England, from Liverpool, December 11, 1844, *Long. 98° 7′, lat. 45° 10′ (Reverse) lost quarter-boats; 10 feet water in the hold. No vessel in sight."

The paper and bottle are both in my possession.

I am, &c.,

R. FARGHER.

[We are inclined to think that the longitude is 8°, as the vessel only left

* There must be an error in this.

Liverpool on the 1st December and the paper is dated 11th. It confirms the suspicion that the unfortunate England foundered with all on board. In p. 272 we noticed her absence.]

Nautical Notices.

City of Dublin Steam Packet Company's Office, Liverpool, June 18th, 1845.

Sir.—I beg to inform you that one of this Company's Steam-vessels (the Queen Victoria) on her passage from Dublin to this port, on the 24th May, struck on a rock not laid down in any chart. The vessel was passing between the Coal Rock, and Harry Furlong's Rock off the Anglesea Coast. I have already furnished Lieut. Lord with some of the particulars for your information, but I have now others to add, and think it better to address yourself. I have got the Queen Victoria in the graving dock and from the injury she received there can be no doubt she struck on a rock. Her Captain (an experienced coaster) took the bearings of the Skerries and Perch, on the Furlong rocks, the former W.b.N. ½ N., the latter S.b.E., *the West Mouse Rock open of Carmel Point.* As the vessel did not stop, and the bearings were not taken till she was over it, they may not be quite correct, as may be inferred from what I am going to state of another instance of a vessel striking there. On naming the subject to a Builder in Liverpool, he told me of a vessel having struck in the same place about ten or twelve years ago, the vessel a brig called the Shepherdess, Turner Commander. I wrote to him, and have just received his reply, which agrees with the account given by the Captain of Queen Victoria, except a little difference in the bearings, but there can be no doubt of a rock being in that locality which is not laid down. Captain Turner gives the bearings of the Skerries N.W.b.W., the West Mouse clear of Carmel Point a handspike's length. The rock had only 8½ feet water on it, while under this vessel's bow and stern were 12 fathoms, 20 feet springs. She stopped on the rock, consequently the above account may be depended on. Capt. T. further states that he reported the above to the Harbour-Master and Underwriters here, but no notice was taken of it, and as in this case every body concluded it must have been the Coal Rock.

I beg to state that should you send a vessel to find this rock, I shall be happy to allow Capt. Brown of the Queen Victoria to go in her, and give his assistance in finding it, but it strikes me they will have to sweep for it as it appears to be a mere point.

I am Sir, &c,

To Capt. Beaufort, R.N. D. R. Sarsfield, R.N.

[As soon as we had laid down the bearings of the Queen Victoria, we had no doubt that the rock she struck on was not on the chart, but at the same time does exist. As Com. Robinson in the *Shearwater*, is directed to search for it by sweeping, we shall give his account of it in our next number, cautioning vessels to keep outside the Skerries until its position is finally determined.—Ed. N.M.]

Loss of the Coringa Packet.—We insert the following extract from an account of the recent loss of this vessel, as a caution to seamen not having yet had an opportunity of examining it.—Ed.

"The position of the danger on which the Coringa Packet was wrecked is as follows:—Lat. 16° 52′ 30″ S., long. by the means of 20 lunar observations 149° 55′ 45″ E., the chronometer showing a longitude of 149° 55′ E., variation of the compass 9° E.; rise of tide at springs 5 feet; the island about 10 feet above the level of the sea, surrounded by a reef dry in some places at *low water*, the wreck of the vessel bearing N.E. by half a mile; and the

whole of this danger does not exceed 4½ miles in circumference. Another small island we observed to the S.W. about four miles, and apparently a safe passage between the two, although the charts show a clear navigation from Tregose's Island to the coast of New Holland in a N.W. direction. It is my opinion that other dangers exist, for on the third night after leaving the island in the boats I am certain we passed in the vicinity of other dangers, although we saw nothing at daylight."

New Books.

THE DISPATCHES AND LETTERS OF VICE ADMIRAL LORD VISCOUNT NELSON, *with Notes by Sir Nicholas Harris Nicolas, G.C.M.G. Third Volume, January* 1798 *to August* 1799.

Sir Harris Nicolas truly says in his preface that "although the letters in the present volume relate only to about one year and eight months (namely from the 1st of January 1798 to the 31st of August 1799) they illustrate, perhaps, the most important as well as the most interesting events of Nelson's life,—the first of his brilliant victories, and the only transactions in his professional career to which blame has ever been attached" It would take us beyond our limits to enter the lists of controversy in reference to the unhappy execution of Caraccioli in the Bay of Naples; rather would we allude to the brilliant successes of Nelson which signalized this eventful period of his life. We would therefore commend this important volume to our readers, and in deciding for themselves on the foregoing question would have them first decide whether Lord Nelson was to be blamed or not in suspending the Armistice which in his absence had been agreed on by Captain Foote.

ON THE ESTABLISHMENT OF NAVIGATION INSTITUTIONS AT THE OUTPORTS. *By James A. Sharp.*—London: R. B. Bate, 21, Poultry, and 23, Royal Exchange, Chart Publisher of the Admiralty, 1845.

In the shape of a letter to the Right Hon. Viscount Sandon, M.P., Mr. Sharp has discussed the important subject of the Examination of the Commanders of Merchant Ships, and taken to his assistance the recent evidence before the House of Commons on this subject. For our own parts we have never doubted the propriety of giving the preference to a man whom we know can navigate his ship, rather than to one of whom we had any doubts on the subject; and although the late Mr. Soames declared in our hearing (in the Committee-room of the House of Commons,) that in twenty hours he could give a man sufficient knowledge of Navigation to take a ship anywhere, in spite of his authority we were of our own opinion still, and preferred a training of 24 weeks to 24 hours, which last stock of learning would just about enable him to lose her. But what of that, what if she is lost, Mr. Soames would have been no loser, no one was more careful in these matters. Insurance screened him, and this was always an easy way of bringing a voyage to an end and perhaps the most satisfactory one also! certainly the least troublesome! There is much to be done here; we have more than once endeavoured to separate the tares from the wheat, the evil from the good in cases of insurance and we hope yet to see it done. Mr. Sharp says why not have a Coroner's Inquest on lives lost by wreck, and we say why not also? This is so intimately connected with the whole subject of mercantile maritime affairs that the efficiency of Commanders in Navigation is but a link in the chain. This link however is likely to be supplied, and the Schoolmaster should be referred to, and we are glad to find that he will be. There are many subjects in this pamphlet which our space will not now enable us to allude to, but we may do so hereafter, and in the mean time we recommend our readers to look attentively into Mr. Sharp's letter.

New Charts.

Published by the Admiralty, and Sold by R. B. Bate, 21, Poultry.

Bonacca Island, *by Lieut. T. Smith*, 1840, *Price* 2s.
Ports on the West Coast of Italy, *by Capt. W. H. Smyth*, 1843, *Price* 2s.
Cacheo River, *by Lieut. Arlett*, 1834, *Price* 2s.
Miramichi Bay and River, *Sheet* II., *by Captain Bayfield*, *Price* 2s.
Arafura Sea, *corrected to* 1843, *by Capt. O. Stanley*, *Price* 2s.
Filey Bay, *by Capt. Washington*, 1844, *Price* 6d.

Monthly Record of Naval Movements.

Amazon, 26, Capt. Stopford, 12th August, at Malta; *Acheron*, Lieut. Com. Aplin, 12th August, at Marseilles; *Alligator*, Mas. Com. Aplin, 9th June, arr. at Singapore from Penang.

Calliope, 26, Capt. E. Stanley, 19th August, left Plymouth for New Zealand; *Crocodile*, 15th August, left Sheerness for Cork; *Cleopatra*, 26, Capt. Wyvill, 3rd June, arr. at Simon's Bay from Saldana Bay; *Conway*, 26, Capt. Kelly, 7th June, left Mauritius for Madagascar; *Collingwood*, 80, at Callao, 5th April; *Cruizer*, 16, Com. Fanshawe, 3rd June, arr. at Singapore from Malacca; *Cormorant*, st. v., 28th June, arr. at Callao from Lima.

Devastation, st. v., 12th August, at Constantinople; *Driver*, Com. Hayes, 14th April, arr. at Hong Kong from Singapore. *Espiegle*, 12, Com. Thompson, 11th June arr. at Cape on her way to Hong Kong.

Fantome, 16, Com. Sir F. Nicholson, 12th August, at Gibraltar. *Fox*, Capt. Sir H. Blackwood, 3rd July, left Madras for Trincomalee; *Fisguard*, 42, Capt. Duntze, 5th April, at Callao.

Grecian, 16, Com. Montgomery, 6th June, arr. at Rio from Pernambuco, 26th remained. *Hecla*, Com. Duffil, 1st Aug., arr. at Malta from Piræus; *Heroine*, 6, commissioned at Plymouth, September 3, by Com. C. Edmunds.

Iris, 26, Capt. R. Mundy, 21st April, arr. at Amoy from Hong Kong; *Inconstant*, 36, Capt. Freemantle, 24th August, left Smyrna for Corfu; *Kingfisher*, 30th August, commissioned at Portsmouth, by Com. C. F. Brown.

Modeste, 18, Com. Baillie, 20th June, arr. at Callao from Arica. *North Star*, 26, Capt. Sir E. Home, 9th May, arr. at New Zealand. *Orestes*, 18, Com. Cannon, 12th August, at Corfu; *Osprey*, 12, Com. Patten, 11th May, left Singapore for China.

President, 50, commissioned 16th August, by Capt. W. P. Stanley, at Portsmouth for flag of Rear Adm. Dacres. *Racer*, 18, Com. Peel, 7th June, left Rio for Monte Video. *Snake*, 10, Com. Devereux, 10th August, left Malta for England; *Siren*, 16, Com. Edgell, 7th August, arr. at Malta from England; *Spartan*, 1st September, paid off at Plymouth.

Tyne, 26, Capt. Glasscock, 12th August, at Piræus; *Thunderbolt*, Com. Broke, 23rd May, arr. at Mauritius from Cape, 7th June sailed for Madagascar. *Warspite*, 50, Capt. Wallis, 12th August, at Beyrout; *Wolfe*, 18, Com. Clifford, 3rd June, arr. at Singapore from Penang.

Portsmouth.—In Port—*Victory*, *President*, *Excellent*, *Apollo*, *Kingfisher*, *Comet*, and *Nautilus*. In Harbour—*Athol*, at Spithead.

Devonport.—In Harbour—*Caledonia*, *Daring*, *Heroine*, *Jackal*, *Confiance*, and *Bloodhound*.

Sheerness.—In Harbour—*Dwarf*, *Raven*, and *African*.

Promotions and Appointments.

(From the Naval and Military Gazette.)

Promotions.

Captain—A. Lowe.

Commanders—R. Moorman,* F. P. Egerton, and I. de T. Prevost for his gallantry in the capture of a pirate slaver on the coast of Africa.

Lieutenants—W. C. Marshall, A. M'Naghton, O. Bentall, S. H Picard, G. K. E. Wright, W. A. R. Lee, W G. Mansfield, W. N. L. Lockyer, F. A. Boyce, W. H. Payne.

Surgeon—S. M. Webb.

Appointments.

Captains—P. J. Blake (1841) to *Juno*—D. Pring (1814) to *Imaun*.

Commanders—C. F. Brown (1841) to *Kingfisher*—C. Edmons (1841) to *Heroine*—J. M. Mottley (1843) to *President*—F. P. Egerton (1845) to *Hazard*.

Lieutenants—G. H. Wood (1841) to study at Naval College—H. G. Morris (1837) to *Juno*—H. Stewart (1840) to *Apollo*—G. K. E. Wright, C. Rainer, W. G. Mansfield, and W. N. Lockyer to *Penelope*—W. G. Deane (1843), W. E. Shaw, and J. Cawley to *Vindictive*—M. B Cockraft (1844) to *Excellent*—E. P. B Von Dunnop (1838) and F. Marten (1844), W. A. Jamieson, and Hon. T. Pakenham to *President*—L. B. Mackinnon (1842), W. H. Payne (1845) to *Heroine*—W. J. R. Card to *Kingfisher*—S. H. Picard, and O. Bentall to *Agincourt*—E. W. Turnour to *Juno*—W. P. Newenham to be Agent in Mail Packet.

Masters—P. Looney to *Juno*—J. G. H. Thain to *Kingfisher*—T. Driver to *Dee*.

Mates—C. J. Didham to *Vindictive*—G C. Lloyd, S. Skipwith, S. Henderson and T. B. Hannam to *Excellent*—W. H. Connolly to *President*—J. B. P. Field to *Seaflower*.

Second Masters—O A. Winstanley to *Avon*—W. C. Payne to *President*—S. Spain to *Heroine*—T. T. Crout (act.) to T. Hogden to *Cuckoo*—J. G. Millet to *Victory*.

Midshipmen—G. Lambert and H. M. Elliot to *Victory*—J. W. Vaughan to *Melampus*—A. D. Mercer to *Canopus*—F. G. Probyn to *Hibernia*—P. Darnell to *Excellent*—Hon H. Best to *Kingfisher* C. H. Wise, F. Dashwood, T. Symonds, W. Gregory, and A. G. Fitzroy to *President*—C. Balfour to *Superb*—A. Bathurst to *Rodney*.

Naval Cadets—E. S. Colpoys, A. J. Innes, J. Hussey, Gilmore, C. Smith, W. Grant, C. Montague, and T. Bishop to *President*—F. Dowse to *Seaflower*.

Masters Assistants—C. Clements to *Heroine*—Burnett and Williams to *President*

Surgeons—R. McCormick to *William and Mary* yacht—J. W. Johnston to *Pestonjee Bomanjee*—G. Doak to *Kingfisher*—J. Walsh to *Heroine*—J. Allen to *Juno*.

Assistant Surgeons—J. Morgan to *Kingfisher*—J. Philip to *Juno*—G. R. Anderson to *Dee*—J. W. Roberts and J. Cockin to *President*—J. Rae to *Meteor*—J. Stirling to *Avon*.

Paymasters and Pursers—J. M. Hope to the Packet Service at Dover—W. Thomas to *Kingfisher*—R. Kelland to *Heroine*—W. Basden to *President*—G. T. Plumbly to *Juno*.

Clerk—J. C. Paine to *President*—W. Wiseman to *Sydenham*—R. Curgenven to *Dasher*,

Appointments—Lieut C. W. Pears to St. Albans Head, Lieut. W. Brooman to Dunbar.

Removals—Lieut. E. Hill to Thorney, Lieut. Oxford to Bridport, Lieut. Curteis to Milk Cove, Lieut. J. Davidson to Cockbush.

Marriages and Deaths.

Marriages.

At St. Georges, Hanover Square, 11th Sept, Capt. Woodgate, R.N., to Louisa Hay, daughter of the late M. Walker, Esq., R.N.

At Fishbourne, R. Leigh, Esq, to Georgiana Teresa, daughter of Captain Read, R.N.

At Euston Square, Capt. F. W. Pleydell Bouverie, R.N., to Madeline, daughter of the late J. Alexander, Esq.

At Valparaiso, April 5th, R. W. Cutts Esq. to Harriett, daughter of Lieut. G. Bunster, R.N.

At Kilwarton, A. Currie, Esq., to Dorethea, daughter of the late Admiral Sir M. Seymour, Bart.

At Cheltenham, D. A. Clarke, Esq. to Arabella, daughter of Capt. Sheridan.

Deaths.

Lately the Rev. D. Lloyd, chaplain of Greenwich Hoseital.

At Beyrout, Aug. 10, Mr. E. Chaffers, Master of H.M. Warspite.

At Exeter, Commander S. Cuming on the Retired List of 1816.

At Devonport, Sept. 8, Mr. Tucker, Paymaster and Purser.

METEOROLOGICAL REGISTER.

Kept at Croom's Hill, Greenwich, by Mr. W. Rogerson, of the Royal Observatory.

From the 21st of August, to the 20th of September, 1845.

Month Day.	Week Day.	Barometer.		Fahrenheit Thermometer, In the Shade.				Wind. Quarter.		Wind. Strength		Weather.	
		9 A.M.	3 P.M.	9 A.M.	3 P.M.	Min	Max	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.
		In Dec	In Dec.	o	o	o	o						
21	Th.	29·93	29·99	56	64	47	65	W	W	4	3	bc	bc
22	F.	30·24	39·26	54	67	46	68	SW	SW	3	3	bc	bc
23	S.	30·19	30·15	60	68	49	69	SW	SW	2	4	bc	bc
24	Su.	30·03	30·07	57	67	52	68	W	W	5	3	qber 1)	bc
25	M.	30·06	30·02	60	68	49	69	S	SW	4	3	bc	bc
26	Tu.	30·01	29·96	61	69	52	70	SW	W	6	4	qbc	bc
27	W.	29·14	30·16	59	63	49	63	NW	NW	4	4	bc	o
28	Th.	30·27	30·29	58	64	52	66	N	NE	6	5	qbc	qbc
29	F.	30·35	30 31	57	67	48	68	N	NE	4	4	bc	b
30	S.	30·33	30·31	54	68	44	70	N	N	3	3	b	b
31	Su.	30·35	30·32	58	74	50	76	NE	NE	2	2	bc	b
1	M.	30·32	30·28	53	67	53	69	NE	NE	3	2	od 2)	bc
2	Tu.	30·22	30·20	59	61	49	63	NE	NE	2	3	o	bc
3	W.	30 23	30·23	57	61	50	52	NE	NE	4	4	o	o
4	Th.	30·24	30·22	54	60	45	63	NE	NE	3	3	bc	o
5	F.	30·16	30·15	56	59	45	62	NE	NE	5	4	qo	o
6	S.	30·20	30·17	56	58	50	60	NE	E	5	4	qber 1)	b
7	Su.	30·15	30·15	56	64	43	65	NE	E	4	3	b	b
8	M.	30·16	30 14	54	66	43	67	N	NE	2	2	bc	b
9	Tu.	30·11	30·07	52	70	42	72	W	SW	1	1	b	b
10	W.	30·09	30·11	56	68	47	69	NE	NE	1	2	o	o
11	Th.	30·07	30·02	55	62	53	63	NE	NE	4	2	o	o
12	F.	29·97	30·01	58	64	33	65	NE	E	3	3	b	b
13	S.	29·95	29·90	54	66	46	68	E	SE	2	2	bcf	b
14	Su.	29·64	29·58	59	65	54	66	SW	SW	2	3	or 2)	bcp 3)
15	M.	29·39	29·49	51	51	46	54	E	N	2	2	or (2	bcp (3
16	T.	29·72	29·62	56	56	44	60	SW	S	2	3	or 2)	or (3) (4
17	W	29·53	29·49	63	63	59	65	S	SW	5	5	qor (1) (2)	qop (3)
18	Th.	29·34	29·32	61	62	54	64	SW	SW	8	6	qbcp (1) (2)	qbcp (3)
19	F.	29·72	29·88	55	60	48	61	W	W	6	6	qbc	qbc
20	S.	29·99	29·93	51	61	39	62	S	S	2	3	bc	or 4)

August 1845.—Mean height of the Barometer=29·892 inches; Mean temperature = 58·2 degrees; depth of rain fallen 3·23 inches.

TO OUR FRIENDS AND CORRESPONDENTS.

We have been obliged to leave over several papers which we hoped to have seen in our present number. Lieut. Ryder's account of the Experimental Squadron of Line of Battle Ships will, however, be followed by another from the St. Vincent in our November number, which we shall accompany with a lithographic drawing of the tracks of each vessel on the several days' trial.

The account of the Capture of a Pirate Slaver on the coast of Africa has been received, and will be given in our next; also remainder of Merchant Seamen's Crimpage Bill.

HUNT, Printer, 3, New Church Street, Edgware Road.

NOTES ON THE ISLAND OF ASCENSION IN THE PACIFIC.—*From Remarks of Com. Blake, H.M.S. Larne*, 1839.

ON closing the Island of Ascension from north-east we observed a remarkable Sugar Loaf to the southward, a mark for Metallanine Harbour, where the Falcon (whaler) was wrecked in July 1836. Here we observed a canoe coming out through the reefs, and in her were two English seamen by way of pilots, whom we received on board. They deprecated our attempting to enter Metallanine harbour, a point, on which my mind had been long since most fully made up. On their recommendation we bore up for the anchorage of Kittie, on the lee side of the island, rounded its north end, where the reef was breaking heavily, and passed to southward on its west side between it and some small low green islands and reefs west of it, five or six miles distant. This group of islands and reefs, which are three or four miles in extent, is termed by the natives Harnd, and belongs to the Chief of Kittie. Much tortoise-shell and Biche de Mer, is collected here, as on all the other islands and reefs. There is also a small group of islands and reefs about thirty-five miles to the north-west of Ascension, called Pankeen by the natives. I imagine this Pankeen is the same as marked St. Augustine in Norie's general chart. By the account of some Europeans at Ascension who had been there, this is a small group of islands and reefs very dangerous to ships, having no native inhabitants, but frequented by the Ascension natives, to collect tortoise-shell, &c., and to make mat sails for their canoes, as these islands abound in the material for it, which is a sort of tough coarse grass. The passage in canoes from the north-west part of Ascension across to Pankeen, occupies nearly six hours, with the north-east trade. I therefore conceive that the distance must exceed thirty-five miles, as their canoes generally sail well.

The native name of Ascension is Bonabe. The island is one of the easternmost of the Caroline Islands, in lat. 6° 53′ N., long. 158° 30′ E. by chronometers. It is high and bold, entirely covered with foliage, and may be seen on a clear day ten or twelve leagues distant. It is surrounded on all sides by a reef, having an opening on the north-east side, and another on the extreme south-western end. The first is Metallanine already mentioned, as well as the Sugar Loaf which is very remarkable. It is highly advisable that no square-rigged vessels of any magnitude should enter this harbour.

The passage is narrow, with two rocks in it at different angles, and as it fronts directly to the north-east, from whence the trade wind is perpetually blowing, a heavy swell rolls in incessantly, and there being no soundings *without* the reef, it is dangerous in beating out in case of the wind dropping, and boats are useless for towing on account of the heavy swell. It was entirely owing to these circumstances that the Falcon of London (whaler) was wrecked in her attempt to beat out in July 1836, after having been three months wind-bound inside. The other opening on the south-west side, is at a place called Kittie, for which we stood in on the morning of the 19th, having laid to for the night. It may be known by two or three low green islands, detached from the main, which become distinct on steering to the north-west. From the description of its narrow entrance given by John Martin, who

was wrecked in the Falcon, and whom we had shipped as pilot, I was unwilling to attempt the passage in, until I had examined it. The first lieutenant and myself went in a boat for that purpose, leaving the ship hove to off. We found it narrow enough, about eighty yards wide, between sunken rocks and the reef. However, we stood in under reduced sail, and anchored in 22 fathoms close to the reef; wayed again; warped ahead, and moored in the most perfect pool I ever saw. With due care and attention this anchorage may be entered with tolerable safety under the guidance of a person of local acquaintance. The white men settled on the island generally answer this purpose.

After passing an outer bight or bay formed by the outer reefs, in which there is nothing less than 45 fathoms, a north-west course leads for the inner passage, which, for about 200 yards is 80 yards wide between a sunken rock, with four feet on it, on larboard hand, and the line of the inner reef very steep to, (7 fathoms,) which should be hugged as closely as possible. The course through the narrow is N.W.b.W.; but a fixed course or marks are unnecessary, as a ship would always pass in and out as the *Larne* did, by the deep water, as distinguished by the eye, when conned from the fore top-gallant-mast head. The ordinary north-east trade is a leading wind in, with very smooth water, and when through the narrow, it is requisite, if possible, to shoot to starboard round the tongue of the reef, clewing all up, and anchor in 22 fathoms. Then warp to northward up the pool to any depth from 20 to 7 fathoms, which it is best to do evening or morning when the wind drops.

At the *Larne's* anchorage we found the latitude 6° 48′ N., longitude 158° 26′ E., variation 9° 45′ E., high water (full and change) 6 hours, rise and fall 4½ feet.

This anchorage was surveyed by Lieut. G. S. Reynolds,* and Mr. R. Edwards, (Mate,) of H.M.S. *Larne*, and a plan of it forwarded to Rear-Admiral Sir F. Maitland at Trincomalee, 29th August, 1839. It is a perfect pool with strong clay holding ground. To the northward a fine stream of fresh water discharges itself, which can only be entered by boats, an hour before and after high water, with just sufficient breadth to ply the oars. The best place for filling is about half a mile up the stream, near a hut where the natives make nets and repair canoes. Just above this spot the clear fresh descends in a torrent.

We obtained some pigs from Europeans, who had introduced the breed; and a few yams. No poultry of any sort to be had. Some good fish were caught. The whole island abounds with cocoa-nuts, and the bread fruit in great variety, on which the natives subsist. We were foiled for a day or two in moving from this place owing to the wind drawing unusually eastward.

The Climate of the Western Coast of Africa.

The Appendix to the Reports of the Select Committee on the Western Coast of Africa contains much valuable information relative to the causes

* A very creditable survey, preparing for publication by the Admiralty.—Ed.

of the unhealthiness which prevails in that portion of the world. As this subject is one of deep importance, we purpose giving a summary of the facts embodied in this part of the parliamentary report. Under the article "Temperature" some observations are made on the powers of accommodation possessed by the human body to harmonize the effects of an elevated external temperature with the animal heat generated within the human frame. It is necessary to consider this subject in connexion with the influence of the tropical climates on the bodily health. It is maintained when this power of accommodation is defective, and there is not only an excess of external but of internal heat, the additional excitement thus produced gives rise to a series of morbid phenomena varying in intensity according to the amount and duration of the excitement. The "seasoning" which it is necessary for Europeans to undergo in hot climates before they can resist with impunity the elevated temperature, consists in diminishing the power of generating internal heat, thus bringing the temperature of the body in harmony with that which is external to it. Professor Daniell, in a communication addressed to Sir John Barrow* in 1840, has made some curious observation *On the Waters of the Coast of Africa, and the Cause of Disease in Tropical Climates*, to which Dr. Madden has made special reference.

Professor Daniell analyzed the Sierra Leone River, (three miles from the mouth), Rio Volta River, Bonny River, Nun, Corisco Bay, Gaboon River, Cape Lopez Bay, and Congo. Professor Daniell found these waters strongly impregnated with sulphuretted hydrogen. He says, the "effects of this gas on the copper sheathing of ships cannot fail to be highly injurious." He also observes that "a question of still higher importance arises, whether this deleterious gas may not contribute to the well-known unhealthiness of the coasts from which these waters are taken." Sulphuretted hydrogen gas is said to impregnate the waters of the western coast of Africa through an extent of more than sixteen degrees. The Professor conceives that this gas may be generated either by submarine volcanic action, or the re-action of vegetable matter upon the saline contents of the water. To the last source he attributes the evolution of sulphuretted hydrogen gas in these waters, to the existence of which he refers the unhealthiness which prevails on these coasts. We consider this theory extremely probable when we remember the action of vegetable matter upon the sulphates, and the immense quantities of vegetable matter which must be brought by the rivers within the influence of the saline matter of the sea.

The unhealthiness of mangrove swamps in all parts of the world is said to arise from that tree requiring salt water for its growth, and its decaying foliage being thus brought into immediate contact with the sulphates. The avoidance of malaria on the western coast of Africa is to be obtained by not lingering in situations where the water affords indications of the existence of this gas; that this gas is to be detected by

* This very interesting report will be found in our volume for 1841, January number, p. 20. Some further notice of the same subject follows in the same volume, p. 737, and in our volume for 1842, p. 378. Dr. Armstrong, of Devonport, Deputy Inspector of Hospitals and Fleets, has communicated some important observations in connection with the subject, referring principally to *the cause of the mortality* in the Niger Expedition.—Ed.

the sulphate of copper, and it can extend but a small distance up rivers. Where this malaria exists, the danger may be obviated or mitigated by copious fumigations with chlorine generated with common salt, manganese, and sulphuric acid, as the contact of chlorine with sulphuretted hydrogen instantly effects decomposition. Dr. Madden is disposed to question the soundness of Professor Daniell's theory, "If," he says, "the mixture of salt and fresh water be essential to the generation of malaria, where the tide does not reach, or where the mangrove growth ceases, the fatal fever ought not to prevail. Is such the case?"

The greatest mortality that has occurred in the African expeditions took place high up in the country, hundreds of miles from the coast. This was the case in Parke's, Messrs. Laird and Oldfield's, and Captain Tucker's expeditions. In 1840 the Lieutenant-Governor of Gambia, with the view of improving the healthiness of the place, opened the great sluice on the island, and allowed the sea water to overflow the land, and mix with the stagnant fresh water that had lodged in the dikes. The sea water overflowed the streets, even in some quarters to the doors of the houses, without producing any sensible effect on the health of the inhabitants. Dr. Madden, however, concurs in the propriety of preventing the mixtures of sea and fresh water in confined situations. The sulphuretted hydrogen gas which Professor Daniell found in these waters in England is said to have been the result of the alteration which the waters had undergone during the time of their conveyance to this country from the western coast of Africa. On this point Dr. Madden says—

"In the month of January last, a friend of mine, who was aware that I was not in the habit of drinking wine or spirits, thought it would be advantageous for me to have pure water, in those places where I was then going to, and whose unhealthiness has been ascribed by some to the impurity of the water on the coast, had sent me two barrels of water, taken from a spring rather celebrated for the purity of its water, called St. John's Well, on the property of a gentleman in his neighbourhood. Great care was taken in the preparation and filling of the casks, and I took them with me to Cape Coast Castle. There, on opening a vent in one of the casks, to my great surprise and disappointment, the effluvium that escaped of sulpheretted hydrogen was intolerable. In plain terms the smell was that of rotten eggs, and the colour nearly as dark as that of water in which a brush had been dipped with Indian ink. I then examined the other barrel, and the result was similar. I had the bungs taken out, and again examined the water in four or five day's time, and it had undergone no improvement. Had this been river water, probably the salts suspended in it would have prevented this complete decomposition and so large an evolution of sulpheretted hydrogen, and have occasioned a second fermentation, which would have tended to its ultimate purification; and probably in the African rivers there is a smaller quantity of these salts dissolved than in those of Europe, and are not sufficient to prevent decomposition on the voyage to England, or to effect its subsequent purification. If this be so, the presence of the sulpheretted hydrogen in the small quantities of the various waters presented to Professor Daniell for analysis is easily accounted for, and the theory that is built upon this hypothesis must be received with caution, in order that the lives of men may not be risked on the opinion that the jungle fever

of Africa is confined to the rivers or sea-coast of that country, and by avoiding these they escape the perils of the climate.

"These perils, in my opinion, are occasioned by atmospherical conditions, and circumstances connected with vegetation, and not by peculiarities in the waters of these countries. The fever of Africa is not confined to swamps or marshes; it has been found as deadly to European troops in Accra, where there are no swamps or marshes in the vicinity, as at Cape Coast, where lagoons exist in its neighbourhood. In a word, wherever there is a hot and humid atmosphere and an uncultivated country, with a rich soil and a rank rapid vegetation, there the elements of African disease are to be found, and there also its perils are to be avoided."

The climate of Sierra Leone is pronounced, in the words of Mr. Boyle, in his work on the climate of Western Africa, to be "decidedly unfavourable to the human constitution in general, and to Europeans in particular; it has no marked peculiarity which distinguishes it from the other parts of the western coast of Africa which lie within the tropics." The description of the climate of Sierra Leone is applicable to the whole of the coast, from the Gambia to Fernando Po. The fevers which Europeans are subject to, go under various names, such as "local," "seasoning," "climatorial," "bilious-remittent fever," and in their epidemic form are called "yellow fever," "Balam fever," and "malignant harsh fever." The fever prevails at our settlements during the rainy seasons, and persons between the ages of 20 and 40, of full habit of body, are most liable to be attacked. The fever lasts from seven to ten days, and is seated principally in the brain. Under ordinary circumstances, it is not contagious, but becomes so when the *virus* is concentrated; and it occurs in ill-ventilated or crowded places.

Of the character of the fever Dr. Madden says—

"One of the earliest symptoms is the tendency it has to produce delirium, or incoherency of speech, or impairment of memory, or irratibility of temper, before any other violent symptoms have set in. The person seized usually complains of dull pains in the limbs, especially the calves of the legs or muscles of the thighs, slight shiverings, intense pains in the back, heaviness over the eyes, pain of the head, nausea, uneasiness at the pit of the stomach, great nervous excitement, confusion of ideas, lassitude and debility. There is usually a remission in the symptoms every other day for three or four hours, and during this period the patient thinks the fever has left, or is leaving him, and that there is little the matter with him. These symptoms increase in severity till the eight, ninth, or tenth day, when either the continuance of delirium, or the outbreak of perspiration, and a long and quiet sleep, indicate the determination of the disease either of a favourable or a fatal character."

There are two modes of treating this fever—one by bleeding, and the other by administering calomel in large doses. For the information of the medical faculty we extract from the report before us a brief summary of the course of treatment pursued by the medical men who have had practical opportunities of testing the efficacy of some remedial agents in cases of the fever peculiar to Western Africa:—

"With respect to the mode of treatment now adopted, Dr. Fergusson, staff surgeon of Sierra Leone, says, 'The ordinary routine is aperient

and purgative remedies; bleeding, local or general; mercurial remedies, salivation, cold sponging, cold effusion, sinapisms, blisters; quinine in cases of remission.'

"Dr. Aitkin, the colonial surgeon of the colony, says, 'The ordinary treatment is bringing the system under the influence of calomel, and pursuing the treatment recommended by Dr. James Johnson.'

"Mr. M'Donald says, 'The mode of treatment is to salivate as soon as possible; and the sooner the patient is salivated the better chance there is of his recovery.'

"Dr. Robertson, colonial surgeon of the Gambia, says, 'In mild cases, purgatives with small doses of James' powder have been found beneficial in the hot stage, and large doses of quinine during the remission. In the more severe cases a brisk purgative, followed up by small doses of calomel or blue pill until the mouth is slightly affected.'

"Dr. Cobbold, medical officer at Cape Coast Castle, says, 'The ordinary routine of treatment is saline aperients or sudorifics; mercury only as a purgative in the first stage; tonics and stimulants afterwards, always paying attention to urgent symptoms.'

"Mr. Bernard, assistant-surgeon of H. M. ship *Saracen*, says, 'the ordinary course of treatment is 'local bleeding, bringing the system under the influence of mercury, and on the abatement of the fever administering sulphate of quinine.'

"Mr. Charlton, assistant-surgeon of H. M. ship *Wolverine*, says, the treatment 'for Europeans is the same as that pursued in England for severe typhus. Depletion is, however, frequently resorted to when symptoms demand it; and mercury is administered to produce salivation, which is considered a favourable indication. Natives require the lancet, but will not bear the mercurial plan.'

"Mr. Wilson, of Cape Coast, is of opinion that fever is to be treated by diaphoretics, small doses of calomel, and Dover's powder; occasional purgatives and quinine, in the absence of fever.

"In every instance we find mercury recommended; and in one instance only its use is abstained from for the purpose of promoting salivation.

"The bleeding system has fortunately gone out of fashion, and the frightful mortality that attended its practise is no longer known on board our ships.

"Mr. Boyle mentions his treatment of seven cases of remittent fever that fell under his care. The seven men belonged to a merchant-vessel, the Thomas Gelston, and had been employed loading timber up the Sierra Leone river. They were brought on shore, and lodged in the same house; six of the men were bled in the arm by Mr. Boyle; one, who was of a more delicate constitution than the others, was not bled. But all died, and the one not blooded outlived the strongest of the others for the space of 24 hours.

"He mentions another instance of the frightful results of the use of the lancet in the case of a boat's crew of H. M. brig *Plumper*, who had been employed up one of the rivers; 35 of the men were sent into the hospital at Sierra Leone, of whom 29 had died, as Mr. Boyle expresses it, 'in spite of the lancet both on board and on shore.' The lancet has fortunately fallen into disuse on the western coast of Africa; but in my *humble* opinion, the administration of calomel in every case of fever, and

in every quantity, for the purpose of producing salivation, is attended with results not immediately so deadly, but remotely not less mischievous than what we have seen, in two instances only, has followed the indiscriminate and wholesome system of bloodletting in remittent fever. I have known of persons recently who have died of the mercury after the fever had disappeared; and in some of our settlements I have observed that those who had been cured of the fever on former occasions, and undergone salivation in each attack, prematurely decayed, broken down in strength, and ruined in constitution, dragging out the miserable residue of their days, neither sick nor well, but lingering in life without sufficient health or strength to enjoy it. Nevertheless, the practice is general, especially in the naval service on the coast; and many of the medical officers who have adopted this mode of treatment are persons of the highest attainments in their profession, and whose opinions on any subject connected with it are highly deserving of attention."

Dr. Madden discusses separately "the question of contagion." He does not consider the fevers of Western Africa, under ordinary circumstances, and in this mitigated form, to be contagious, but when this virulence is augmented by local and atmospherical peculiarities, in close chambers, in uncultivated situations, in temperatures suddenly elevated, and in places where cleanliness and ventilation are neglected, Dr. Madden believes that the miasma from the concentrated exhalations in such places and such circumstances is capable of exciting fever in other persons. Few practitioners on the western coast of Africa are advocates of contagion. Dr. Madden maintains, that the difference between plague and typhus fever, and the yellow fever and bilious-remittent, is only of one degree; but as the point is of much importance, we quote Dr. Madden's own observations in reference to it:—

"As plague is the most concentrated form of typhus fever, so yellow fever in its appearances presents the most virulent accumulation of the symptoms of bilious-remittent fever; and between the fever of the West Indies and that of the Western Coast of Africa, the only difference is in the degree of its intensity, and the quicker process of putrefaction, which goes on in the latter, causing discolouration of the blood, the extravasation of dark and grumous matter from the coats of the stomach, which do not take place in the common class of bilious-remittent fevers on the coast of Africa. But with respect to all other symptoms, having experienced the effects of yellow fever in Cuba, and bilious-remittent fever on the Gold Coast, I repeat from my own experience, that no other difference exists than the lesser degree of intensity in the common fever of Africa, the longer period of its duration, and the greater tendency to celebral than stomachic disorder in the early stage of the latter. Yellow fever usually runs its course in five days in the West Indies; bilious-remittent fever on the coast of Africa seldom reaches its crisis before the seventh, and frequently not before the ninth or tenth day of the attack. Both forms of fever arise from exposure to the miasma of decomposed vegetable matter, and under certain circumstances, both are equally capable of spreading within narrow limits in confined and ill-ventilated situations."

Dr. Madden dwells warmly upon the vexations to which commerce is subjected by the quarantine regulations, and the inconvenience which travellers are put to in lazzarettoes. He considers that the period of

quarantine ought to be abridged. If no symptoms of the suspected malady make their appearance within the term of ten days from the period of landing and isolation, there is every reason to believe that the seeds of the disease do not exist, or are inert. This is said to be the opinion of the strongest advocates of contagion in Alexandria and Malta.

THE ECLAIR.—The recent fatal effects of the fever on board H.M. steam-vessel *Eclair*, appear to proceed from one of those periodical sweeping fevers which occur on the coast of Africa at intervals of six or seven years. The last awful visitation of the kind took place in the autumn of 1837 and the spring of 1838. Nearly a score of medical officers of the Navy fell victims to the fever on that occasion. Against these awful, and, in some cases, sudden disastrous attacks, not even the most inured to unhealthy climates are free. It sweeps away alike those who have been long used to the coast of Africa, and who have survived more than one attack of ordinary fever, and those who pay a service visit to the coast for the first time, and it has been known to attack those who have spent years in the variable climates of the East Indies, as well as those who have survived the fatal epidemic peculiar to the West Indies; and the instances are very rare in which the patients completely recover. With respect to the *Eclair*, it appears that the fever made its first appearance when that steam sloop was at Sierra Leone,* and after leaving that place, on 23rd July, it rapidly increased. The *Eclair* proceeded from Sierra Leone to Goree, and thence to Boma Vista. On arriving at the latter place, on the 31st of August, by the permission of the Portuguese governor of the island, Captain Estcourt landed all his crew, with the exception of two white men and some Kroomen, and he quartered them in one of the little islands adjacent, and in a small fort which was very kindly placed at his disposal by the governor; but, notwithstanding the care and attention which Captain Estcourt exercised, the malady increased, and between four and five deaths daily occurred. They were in this condition when the *Growler* steam-sloop, Commander C. H. M. Buckle, arrived (which was on the 6th of September,) on her way to England, and, with that kind fellow feeling which is so universal among sailors, he and his officers immediately proffered that assistance which was so much needed. The day after the *Growler* arrived, the Assistant-surgeon of the *Eclair*, Mr. C. Blackman, was numbered with the victims, and to supply his place at such a momentous crisis, Captain Buckle appointed his own Assistant-surgeon, Mr. C. Coffey, and additional medical attendance was afforded the next day (the 7th Sept.) by the volunteering of Dr. G. M. M'Clure, who was a passenger in the *Growler*, having left the *Actæon*, 26, on his promotion to the rank of Surgeon. Dr. M'Clure was then appointed Supernumerary Surgeon of the *Eclair*, and commenced his duties with great vigour, but with short-lived success. The ravages of the disease still continuing, a council was called, and the medical officers proceeded

* At Sierra Leone some of the crew of the *Eclair* passed several nights on shore, imbibing there the seeds of that malignant fever which proved so fatal to her. Proceeding thence to the Cape Verds, to a higher temperature, rather encouraged than allayed it.

to survey the condition of the crew of the *Eclair*, after which they came to the unanimous conclusion that the ship's company should be re-embarked, and the vessel should proceed to Madeira; and if there was then no abatement of the fever, she should go on to Portsmouth. Accordingly the anchor of the *Eclair* was lifted on the 13th ult., and she arrived at the island of Madeira on the 19th. It was during this short interval of six days that they lost their esteemed and gallant Commander. There were no less than seventeen cases of attack, out of which five died, Captain Estcourt and Dr. M'Clure, who had so devotedly volunteered his services, being of the number. In this run the Surgeon of the *Eclair*, Mr. Maconchy, after long and unwearied efforts, was seized. He was taken ill on the 16th, and on the fifth day from that date (the 21st) he was no more. The *Growler* arrived at Madeira on the 20th, and finding the condition of the crew of the *Eclair* in no respect improved, and the medical attendants reduced to Mr. Coffey, the Surgeon of the *Growler*, Dr. W. F. Carter was appointed to the ill-fated vessel on that day, in Mr. Maconchy's place, that gentleman and two of the crew dying the day after. The *Eclair* left Madeira on the 22nd ult., and from that time to the day after her arrival at the Motherbank eight additional cases presented themselves. Two men on the morning of Wednesday (one of whom had a severe attack of fever in August) showed premonitory symptoms. Five died on the passage from Madeira, and two more have been added to the list of deaths since her arrival.

Thus, of 142 officers and men, the full complement of the *Eclair*, no less than sixty-five have died since April last, and twenty-two only have escaped attack. These are all Englishmen, for it does not appear that any of the Kroomen who formed part of the ship's company have suffered in any way from the fever. During last month forty officers and men died. At the present there are six down with the fever in their beds; two of these are almost in the last stage, and one man is suffering from a second attack.

We believe that the First Lieutenant Mr. Hartson, was invalided some time since. Lieutenant C. N. Isaacson is well on board, and has availed himself of permission to send a single sheet from the vessel to write to his friends. He attended Captain Estcourt up to the time of his death. The other surviving principal officers of the *Eclair* are Lieutenant H. Bullock and the Master, Mr. H. D. Burney.

As the symptoms and progress of this direful disease are somewhat different from the general features of the fever common to the coast of Africa, we have been at some trouble to acquire the following particulars, which we doubt not will be acceptable to our medical readers:—In most cases the patients first felt chilled, then suffered acute frontal pain, with a feeling of pressure over and about the eye-balls; then costiveness, enduring great thirst, with the edges and tip of the tongue bright red, loaded in the centre with a white mucus of a firm substance; the pulse small and quick, but not very hard; skin dry, and severe pain in the loins. Vomiting occurred after a few hours, of a green fluid, attended by a pain across the chest and epigastrium, and then continuous vomiting until all food was ejected from the stomach. On the third or fourth day the patient vomited a brownish flocculi of a dark fluid colour; this became *gradually darker*, delirium ensued, and all the vital powers soon sunk, the

tongue becoming soft, of a bright red, dry in the centre, from which condition none ever rallied. No suppression of urine, glandular enlargement, or changing of the colour of the skin. The general treatment appears to have been an application of warm turpentine over the epigastrium. It in most cases gave ease to the patients, and is said to have been attended with great benefit.

THE following official report respecting the sickness on board the *Eclair*, has just been issued—"October 3, 1845. Sir,—Agreeably to instructions from the Lords of her Majesty's Council, we proceeded to the quarantine station at the Motherbank early on the morning of the 30th, to enquire into the particulars connected with the mortality and the prevalence of a malignant fever on board her Majestys steamer *Eclair*, which arrived on the evening of 28th ult., from the coast of Africa. Having gone alongside and interrogated the Commander Hartson and Surgeon Bernard, the following is the result of our enquiries. The *Eclair* sailed from Devonport in November last, having a crew of 146 officers and men, for the coast of Africa, on which station she remained until the 23rd of July last, up to which period she had lost nine men from the common coast fever. Four days after sailing from Sierra Leone, one man died with fever and black vomit, the first case of the kind which had taken place; this man had been brought on board on the morning of the 23rd, having been the three previous days on shore. During her voyage to Gambia and Goree and Bona Vista, where she arrived on the 21st of August, 18 were attacked with the same fever, with black vomit, of which number 13 died. At Bona Vista, the disease continued to spread rapidly amongst the crew, when permission having been obtained from the Portuguese Governor, it was determined to land the crew, sick and well, and purify the vessel. A fort was appropriated for the accommodation of the seamen and sick, and the officers obtained lodgings in the town. Every measure was taken to purify the ship by washing and whitewashing, fumigation, &c., all the Kroomen remaining on board with the exception of six, employed in attendance on the sick. The disease however continued to prevail amongst the officers and men on shore, 31 men having died between the 21st of August and the 13th of September.

"Under these circumstances a consultation was held by three naval surgeons, and upon their report and recommendation it was determined that the steamer and crew should proceed to England. The ship's company were in consequence re-embarked, and sailed on the 13th of September. Captain Estcourt having been taken ill the day before leaving Bona Vista, died on the 16th. At Bona Vista, the assistant-surgeon Harte, of the *Eclair*, died, when Dr. M'Clure, a naval surgeon, passenger in the *Growler*, and Dr. Coffy, assistant-surgeon of the *Growler*, volunteered their services on board; here also seven seamen volunteered from the *Growler*. Dr. M'Clure died on the voyage to Madeira, and one of the volunteer seamen was taken ill of the fever and recovered.

"Upon the arrival of the steamer at Madeira, the authorities refused [illegible] to communicate with the shore, as had been previously [illegible]

by the French at Goree; but at this island Mr. Bernard, a naval surgeon volunteered his services, and was received on board, with two seamen. From the day of her sailing from Madeira, the 21st of September, up to this date, the 30th, seven deaths have taken place from the fever, and eight new cases have occurred, viz.:—

"Deaths—Sept. 21st; two; 25th, one; 26th, one; 28th, one; 29th, one; 30th, one—total seven.

"Fresh cases—Sept. 22nd, one; 23rd, one; 25th, two; 26th three; 29th, one—total eight.

"The fever still prevailing on board, the first measure deemed necessary was that the ship shoutd be kept in strict quarantine.

"2. That the healthy should be separated from the sick. The steamer was therefore ordered to the Foul Bill Quarantine Station at Standgate-creek; and an arrangement having been made with the Lords of the Admiralty by which two ships in ordinary, with a proper supply of bedding, &c., were ordered to be placed at the disposal of the superintendent of quarantine at Standgate. With the view of personally superintending the arrangements, we proceeded to Standgate-creek, and having ascertained the number of officers and men who had hitherto escaped an attack of the fever—viz., 41, they were directed to be immediately transferred to the *Revenge*, having first undergone the operation of ablution, and afterwards supplied with clean clothing and bedding. All those who had recovered from the fever, together with such number of convalescents as were in a state to be moved, were directed to be transferred to the *Benbow*, leaving only on board the steamer the sick, and such number of officers and men as the commander might think necessary; the Kroomen also to remain on board (not one of whom had been attacked with fever), excepting such number as might be thought necessary to assist on board the *Revenge* or *Benbow*.

"Since the 30th ult. three seamen have died; but we are happy to state that no fresh case of fever has occurred since the 29th ult., and that at present there are only two men confined to bed with the fever, and 11 convalescents, under the care of the two medical officers, a surgeon and assistant-surgeon, who have been on board ever since the *Eclair* sailed from Madeira; and we have a confident hope, from the present state of the crew and the measures adopted, that the progress of this disease is arrested.

We have the honor, &c.,

"W. Pym, *Superintendant-Genl. of Quarantine.*

"James N. Arnott.

"*To C. C. Greville, Esq.*"

Standgate-creek, Oct. 12:—Since my last report of the *Eclair*, I am sorry that I have to inform you of the deaths of Mr. Saunders, pilot, who died on Friday, 10th, at 10h. 30m. p.m., and of Lieut. Isaacson, who died this morning at 8 o'clock on board the Worcester hospital lazaretto. Although these persons at the onset of the disease had favourable symptoms, they became rapidly worse only a short time before death, and expired as above stated. The disease is of a very insidious character, and in two out of three cases proves fatal. Assistant-surgeon Rogers, who come from H.M. *Ocean* last Sunday to the assistance of the sick, was attacked with the fever yesterday. Assistant-surgeon Coffey is now pronounced convalescent, and is the only one that has escaped of those who have been attacked with the disease whilst at this station.—The foregoing is from the Times, Naval and *Military and Shipping Gazettes.*

The Merchant Seaman's Register Ticket.

Sir.—Since sending you my last edition of *foolscap*, I have by mere chance, got hold of your June number of the *Nautical*, in which I find "The Diary of a Seaman," speaks more fully on the Register Ticket, than in your May number, page 234, as also, that he is pleased to compliment some one's strictures on the Merchant Service, in the most handsome manner. I do so wonder if he means me; if so, I am sure I feel particularly obliged, not only by the compliment, but its mode of expression. Now, as I said before, I wont argue the point with him, for this sole reason, I dread all war of words; and it so often happens, that *one* unlucky expression, misinterpreted, may give a vital wound to a man's proper self-respect; that I always prefer looking any one in the eye, with a kind expression in my own, which, (although your opponent may say to himself—"Poor devil, he's wrong altogether!") will prevent him cursing you by his Gods. So, in what I am about to observe as refers to the observations of the "Diary of a Seaman," in your June number, he must honor me by supposing we are having a quiet chat together. As follows—"Wont you fill your glass and take another cigar, my dear Diary? *No?* Oh, nonsense, its not too late, and the whiskey 's good. There, that's right, try that Manila, it 's mild, only put the thick end in your mouth, it smokes freer that way. Now, as to what you say about FORCING seamen into good behaviour, why yes, its very true; we do the same thing with pigs in Ireland, when they *wont* go the right way, but we always try the coaxing principle first, and then—.What do you say? *Don't talk nonsense!* I'm not, I'm perfectly serious, you don't know the trouble we had in Ireland with the '*frind of the family*' till we got a little gossoon to trot alongs before him wid a taty on the ind of a stick he had the *a*ting of at the ind of the journey. It was, hould him if ye plase, he *know'd* he'd get his *proper* reward, and all Cork couldn't turn him the wrang road.

"I beg your pardon, what did you say, my dear Diary. *Oh! sailors and pigs are two very different things!* *I* agree with *you*, tho' its rather a nervous position to take up, with half the world against us. But just for argument sake; (give me a little hot water, my grog 's too stiff, just one thought.) What was I saying, oh! for talking sake, let's suppose Jack a reasoning animal, and capable of good impulses like his fellow men; it would be good policy in Her Majesty's Government, and in Merchants, Owners, and Shipmasters, if they'd just try the experiment of shewing him the *taty*, the true potato, without letting him for ever feel the stick.

"*Yes, Keane, its very true, but that's not exactly the tone in which to argue the matter, vitally important as it is daily becoming, as a matter of national discredit, and social annoyance; its a very serious matter let me tell you.* Well! I'll tell you what, my dear Diary, I have argued this matter in all ways, thought of it in all shapes, and will never cease, stirring up a coal about it, until the apathy of all those most concerned in producing a better and more wholesome state of things, shall have passed away. What do you say? *Its getting late? Never* mind for once, my dear Sir lets have a yarn about what you say

as to Jack having charge of his own Register Ticket. Another cigar? *No?* Well, perhaps, you're right, it is a bad habit, but I've a regard for it somehow: I've caught myself happy in the society of a cigar, on a steamer's paddle-box,—time, midnight,—state of weather, bitter cold with a fog so thick you could hardly see *it*,—place, banks of Newfoundland,—neighbours, icebergs,—self-conceit, feeling of no more use than a tenpenny nail, as to being able to see one so as to clear it, if steering stem on it. What! *I shall never have done talking nonsense?* Well, *I do* beg your pardon, that's a fact, so here goes—serious.

"By-the-bye, only one moment; did you ever, as chief officer, (having been up all the first watch reefing top-sails, and then having the middle one to keep, after trying all ways to keep awake,) did you ever sit down on a hen-coop, with a cigar in your mouth, which gradually left that receptacle, and resting between your fingers on your lap, set fire to your greego, and when the man at the helm gave you a shove in the ribs, you thought it was the captain coming, and popped the lighted end in your mouth? that's the way to keep a good look out for the rest of the watch, I'll tell you.

"What did you say my dear Diary? *What has all this to do with Register Tickets?* Nothing whatever, my dear sir; but sometimes I get into a vein of talking balderdash, and I can't help it; it's just the same with writing,—lor! bless you, sometimes I cannot for the life of me, find one idea to rub bright against another; and then again, of a fine morning, after a cup of coffee, *before* breakfast—tho' mind you no stuffing allowed, but fresh and fasting, my dear Diary, that's the time—why, my ideas behave in the most absurd manner, pinching my fingers, and jogging my elbow, giving me no time to cross a *t* or dot an *i;* and then as for spelling—what are you groaning about? *Am I mad?* No, Heaven forbid. *Then its the whiskey!* No, no, not that even, bless your soul alive; twa glasses o' toddy canna mak ony man fou, and haud a wee, and I'll gee ye a crack aboot dear auld Scotland. Ye see—Laird sake man, dinna look that black at a puir body, I'll na be a minit,—whan I first gat doon the land o' *cakes*—ha! ha! ma dear friend, ye ken neathin aboot how that bye word cam to pass; it was jist a canny way o' saying, W're no a land o' *cakeys* like our neighbours; ha! ha! there 's yeer kail thro' the reek for ye;—but, may I never, the lad 's sleeping; well, I'll e'en hae ma crack oot be me lane. Od sake, but it 's awful droll to be edefying ane's ain sell, but if ye canna snaw white, ye maun be content to snaw broune. There was a queer auld body, down awa aboot Largs, Arran, and Ayrebay, who had a droll way o' filling folk fou, and I recollect wall, the vary first time he asked me to tak a dram, he tauld me to tak good heed, I was not to be a dram, dramming; ther was jist twa occasions on which I ought to tak a dram—When ye've salmon for dinner, and when ye've *nane!*

Bless my soul, here do I find myself trying to talk Scotch when I know it is (to use a vulgar expression) "All my eye and Betty Martin." For, once upon a time, I travelled from London to Liverpool, with an old gentleman from Aberdeen awa, and spent the evening with him discoursing about grouse shooting, deer stalking, &c.; and as he talked broad Scotch, I did my best to imitate him. But, bide a wee, after the *sixth tumbler I think* it was, he said to me earnestly—"Gad lad, I'm

dooting ye're na Scotchman after a'." I confessed the fact of my no being one, with but poor grace I fear, for my friend rejoined with great kindness, "Dinna be fashed, laddie, if ye're no a Scotchman, ye're an improved Englishman."

"Who's that knocking at the door, oh, its the Editor? How are you, my dear Sir? Hush, shut that door gently, I've been talking all kinds of stuff, till Mr. Diary has dropped off to sleep. What say you? *What have we done about the Registry Ticket, and who's to keep them?* Tak a keek at the whiskey bottle, and ye may whistle o'er the lave o't; but now he's asleep you and I will talk it over, quietly, and if he don't hear us, he can't contradict us, eh! Between you and me, *I* don't exactly agree with Mr. D. about what he says as to Jack having charge of his own ticket. In the first place, he is going very far to prove or rather assert (without at all wishing or meaning to do so,) that masters of merchant ships are one shade greater b———ds, or, in other words, less worthy of trust than their crews. I know he doesn't mean this, and I mention the subject for that very reason, because a good many captains might understand it in that light, don't you see, and feel hurt at it. Our friend Diary says:—"It appears that the captain is to be the holder of the ticket during the voyage; and should the seaman conduct himself improperly, it is not to be returned to him; and, consequently, he will be debarred from getting another berth in a British vessel. The seaman thus placed has no other alternative left him than that of transferring his services to some foreign nation, (to America most probably,) so that he may become lost to his country." Now, it strikes me, Mr. Editor, that he (the sailor) has *another*, and pretty strait forward *alternative*, namely, *that of behaving properly*, of sticking to his ship, as Craggler, the Dutchman did, and returning home in the *same* vessel, he signed articles *so to do* in. Also, altho' I fully agree with Mr. Diary, as to the arbitrary and wantonly offensive conduct of *some* masters towards their crews, I cannot be led to think otherwise of this lamentable fact, than that it is the exception and not the rule; and, most certainly if the Seaman's Register Ticket is to be placed in any body's hands, when he is about to start on a voyage, it ought to be, as a matter of mere propriety, as well as justice, in those of his commander. If the sailor is ill used in the course of the passage out, there are but few ports of destination where our men-of-war, or Consuls, are not to be found, where, from one or other of these sources, Jack can procure redress; and if he has really behaved ill, and for that reason alone has brought on himself coercive measures, which are sufficiently repugnant to his uncontrollable spirit to make him wish for a change of ships, he must be a precious rip indeed, not to be welcomed on board H.M. ships, *and no questions asked.*

"But, again, supposing an extreme case, although I fear a possible one, that Jack unfortunately goes to sea with, and is knocked down, and kicked and jumped on when down, and handspiked, by one of those brutes, who both afloat and ashore, are gluttonously fond of trampling on the weak with impunity. Jack, although his sufferings may be longer, provided he can get no redress abroad, has on his return home, the same redress as his fellow citizens, and a beggarly account of empty bottles it is. For (I speak under correction,) I believe it is possible for any

great horse marine of a civilized savage, when full of beer and malice at heart, to cuff, kick, cudgel, and otherwise ill-use an unoffending wayfarer, leaving just as much wind in his unhappy body as would blow a rush-light out, for the sum of five pounds sterling. Jack himself too, perversely encourages this sort of thing, and makes his own case worse either by acting on the *vi et armis* system, and punching his captain's head for him, as soon as he catches him on shore, or worse than all, runs stem on to one of those rocks, just shewing their dirty heads above water, in the neighbourhood of all docks and sailors' resorts, called *par excellence*—Oh! no, not attorneys and *gentlemen*, certainly not, nor is it worth while saying to what they are entitled; but they are sharks, with jaws of iron, and teeth of gall, pandering daily to poor Jack's worst passions, with all the avidity of the harlot, and the cupidity of the crimp, leaving him, his case won or lost, mulcted of his hard-earned gains, and in every way a victim. But, as we have an especial court for trying cases of salvage, and damage by violent contact between two vessels, sentencing heavy damages to the injured parties, it would be as well, for the credit of our Merchant Service, if some sentence, amounting even to dismissal from all future command, was passed on those masters, *proved de jure, de facto*, to have wantonly, and of malice *prepense*, cruelly and unjustifiably, maltreated any one of their crew on the high seas, where, most especially, so very much depends on their own moderation and firmness of principle, as to the furtherance of peace, order, and comfort on board, and profitable results to their owners, intimately connected with their own respectability and standing. That some strong legislative enactment is required on this head, has been sufficiently proved in the able speech of Mr. Aiken* of Liverpool, at the meeting there last year, and that its non-existence is deplored by many other owners as well as the seamen themselves I am fully aware of. But, render unto Cæsar that which is Cæsar's;" if the Register Ticket is a means of controlling Jack's—what shall I call it?—want of stability of character, surely, if the captain is worthy of having charge over him, his ship and cargo, articles and manifests, and to be answerable for their safe and sound delivery, he is worthy to keep charge of Jack's description of eyebrows, length of nose and inches. And as to Jack's being allowed to change his ship once in a voyage, it will never do, my dear Mr. Editor, and I am sure when our friend reconsiders the—why, he 's awake, and has been listening to all our yarn, I verily believe, for the last half hour. Well, my dear Mr. Diary, have you heard what we have been saying about you, and Jack, and the skippers? *No?* Well, never mind, it 's too late now to talk it all over again, so Mr. Editor, here, shall tell you at his leisure. Good night,—God bless you,—take care of the steps as you go out.

"Don't *you* go though, Mr. Editor, for I've just five words to say to you, *only five*, upon my word, so put your hat down and take a chair, —no, not the sofa, hang it you 'll fall asleep if you do. Well, what I want to say is about *you;* it 's a fact, but listen one moment. You are the Editor of the *Nautical Magazine*, and *I* and *one* or *two* other merchant captains, know very well that you are a gentleman, and quite as

* See former number, p. 462.

much inclined to receive the smallest donation of nautical information, with thanks and pleasure, having sound good sense in it, as the very longest yarns, (such as mine I fear.) And also, supposing some of my brother captains should send you in a ball of yarn, with a *leetle* too much tar in it; why I know you are not the man to be afraid of soiling your hands with it, and to cast it aside, as rough spun stuff, but that you will be at the trouble of gently drawing it through your fingers, and turn it out *white line*. What say you, Mr. Editor? *You've the greatest difficulty in getting many captains to favour you with the sterling and valuable nautical facts they daily become intimate with?* I believe you, my dear Sir; and I know why; partly, one half of them have a morbid dread of their donations being either poked fun at, or rejected; but I think this objection will be done away with in future, if you are only good natured enough to print the stuff I sent you in lately. And secondly,—What's an editor? says one; Who's the editor? says another; Is it a man, or is it Mrs. Taylor, or what is he, she, or it? very naturally adding, "I've been to sea all my life, and have had little or no time allowed me, so as to be able to place on paper, ship-shape, the valuable practicable knowledge I know myself possessed of, and I don't want to be laughed at, because I hav'nt swallowed a dictionary." It 's a fact, my dear Mr. Editor, I assure you; and I merely talk it over with you in confidence, that this foolish prejudice may be done away with, and that my brother captains may be led to come forward, one and all, with their valuable bits of seafaring knowledge, without dread of being unthanked or laughed at.

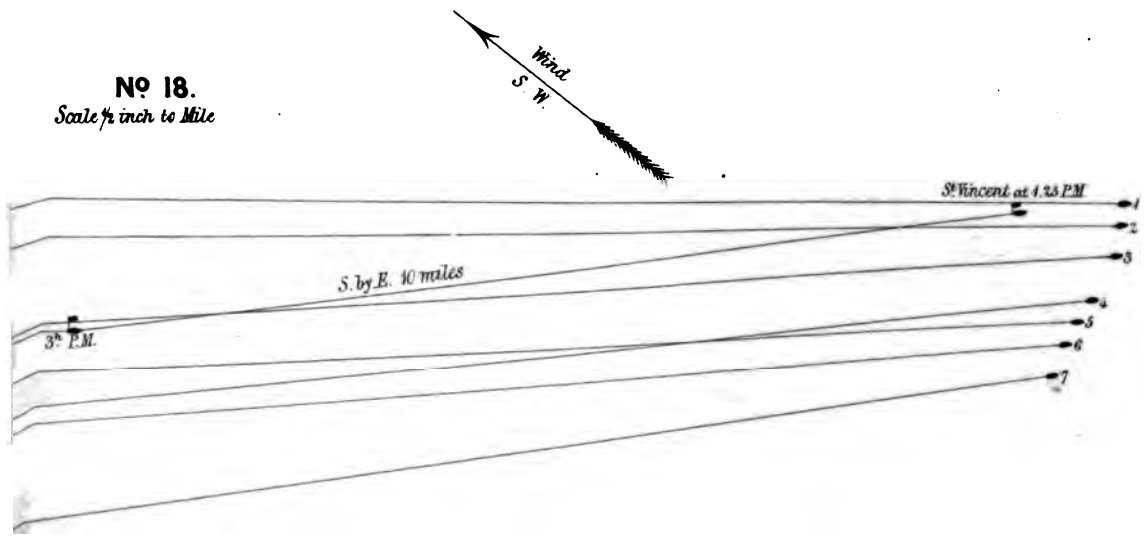
"*What's the use of hiding any kind of nautical information under a bushel?* None! on the contrary, it is really a duty towards our fellow travellers on the wide and perilous ocean to "sing out" in your book, here's a rock, there's a shoal, whenever we know of their existence; and that too, *without fear*.

"Ah! I thought so, you quite agree with me about this matter; Eh? *Hadn't we better go on about the New Merchant Seamen's Act?* No, not to night, Mr. Editor, thank you; what with talking, cigars, and toddy, I am too sleepy, so I shall just say, good night, without any ceremony. Will you just take a weather bit over-all, in the shape of half a glass? *No?* Very well then, adieu."

Well, now they're both gone, I'll just take a wee wee drappie, and sit and cogitate a bit:—so here goes, off boots, on slippers, light a cigar; bother the cigars, what a lot of money they *do* cost to be sure; and besides, every now and then, one gets hold of a long yarn, about nervous debility, injured stamina, &c., enough to frighten a horse from his corn. But for all that, there is great comfort in the inhaling and puffing out of tobacco smoke; for example, if my ideas on any material point, get jammed in a clinch; of course I feel vexed and bothered, and after duly scratching my head, rubbing my nose, and chafing the polish off one boot with the heel of the other,—*all to no purpose*, I light a cigar, a good 'un, a real free smoker, lean back in my chair, and blaze away. In the third or fourth cloud of smoke, I dimly see the ghost of a small idea, and then, puff, puff, puff, away they go, treading on one another's heels, like our tars of old, when the last man up the hatchway got a precious *starting*. I wonder from whom we picked up that piece of dubious jus-

No 18.

Scale ½ inch to Mile



Standidge & Co. Litho. London.

tice. From the Chinese duck-boat men, I suppose, whom I have seen standing by the side of the platform attached to the stern of their boats, (and let down on the river's bank, to enable the ducks to waddle on shore;) with cane in hand, when, having whistled or piped "All hands board." It is quite funny to see the ducks cutting along for dear life, the last one up the side getting considerable of a caning. What a clever, shrewd, rougish nation that is. Capable of vast resources; the real value of which can never be known, or brought into play, fully, so long as their laws are made rods of iron, in the hands of the strong to oppress the weak. So soon as a Chinaman can speak he is taught to lie; and to appear possessed of nothing, not even his own soul; for full soon does he learn, that if in a moment of extreme inadvertance, he confesses to having one; the man, one stage above him, will squeeze it out of him. Well! by George, my cigar's out, what a horrid smell of smoke, that's not pleasant any how. But all human sweets have their bitters, so I'll turn in.

MERCHANT SEAMEN.—The Lords of the Treasury having had under consideration a representation of the Commissioners of Customs, relative to the evasion of the clause in the Act, requiring merchant vessels to take on board and have in store certain quantities and descriptions of medicines, and their Lordships having communicated to the Lords of the Admiralty on the subject, have approved of the suggestion of the Board, that vessels required to carry medicines by the act 7 and 8 Vic., c. 112, are to be occasionally boarded or visited by the Revenue officers for the purpose of ascertaining the quantities of medicines, &c., shipped for the use of the crew; and directions have been issued to the principal officers of the Revenue at the several ports of the United Kingdom, and other places traded to by British vessels to take care that their Lordships' orders are duly carried into effect from the present time. The 18th section of the act directs that every ship navigating between the United Kingdom and any place out of the same, shall have and keep constantly on board a sufficient supply of medicines and medicaments suitable to accidents and diseases arising on sea voyages, in accordance with the scale which shall, from time to time, or at any time, be issued by the Admiralty; and every ship (except those bound to European ports, or to ports in the Mediterranean Sea) is also to have on board a sufficient quantity of lime or lemon-juice, sugar, and vinegar, the same being served out to the crew whenever they shall have been consuming salt provisions for ten day the lime or lemon-juice and sugar daily, after the rate of half an ounce [illegible] per day, and the vinegar weekly, at the rate of half a pint per week to ea person, so long as the consumption of salt provisions is continued; and case of default in keeping the articles mentioned in store, the owner of th vessel incurs a penalty in each instance of 20*l.*; and in default of servin them out as stated, a penalty in each instance of 5*l.*; and in case the maste or any seaman receives any hurt or injury in the service of the expense of providing the necessary surgical and medical advice, ance and medicines, and for his subsistence until cured or bro some port of the United Kingdom, is, together with the costs ance home, to be defrayed by the owner of the ship, without an whatever on that account from the wages of the master or seaman

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EXPERIMETAL CRUIZE OF LINE OF BATTLE SHIPS

THE following account of the late Experimental Cruize of Li Ships, is drawn up from the observations of an officer of the St.

Trial of Sailing, Saturday, July 26th, 1845.

At 9h. 30m. am. Squadron in close order, line of battle ahead; made general signal to chase to windward under all plain sail; tacking every two hours, wind variable from west to W.b.N ½ N.; at 3h. 30m. p.m. taken aback, annulled chase, and made signal to take stations; rate of sailing 5 to 7 knots.

Positions of the Squadron, Bearings, and Distances in yards. *Distances from St. Vincent.*

	At Starting.	At Ending.	Results.			
Trafalgar	S. 5° E. 570	S. 36° E. 3197	Lost on St. Vincent (to windward)			1574
Queen	S. 6 E. 1132	S. 65 W. 4852	Gained on	„	„	5609
Albion	South 1387	S. 16 E. 1336	„	„	„	13
Vanguard	S. 5 W. 2462	S. 64 E. 6277	Lost on	„	„	4821
Canopus	S. 5 W. 2993	S. 28 W. 4170	Gained on	„	„	2681
Rodney	S. 5 W. 3897	N. 60 E. 4616	Lost on	„	„	2017
Superb	S. 4 E. 4920	N. 60 E. 9230	„	„	„	7064

Positions at Starting, wind W.b.N. ½ N., see Fig. 4. Positions at Ending, wind W., see Fig. 5. Scale one inch to mile.

Trial of Sailing, Tuesday, July 29th, 1845. (Wind N.W.b.N.)

At 11h. a.m. Squadron bearing south, the leading ship distant about five miles, made general signal to chase to windward; a moderate and steady breeze from N.W.b.N., squadron under all plain sail, royals occasionally; St. Vincent under easy sail heading N.E.b.N.; at 3h. 30m. p.m. Trafalgar and Queen tacked by signal; and at 3h. 55m. Albion and Canopus tacked; at 4h. p.m. made the general recall, and signal to form the order of sailing.

Positions of the Squadron, Bearings, and Distances in yards. *Distances from St. Vincent.*

	At 11h. a.m.	At 3h. 30m. p.m.	At 4h. p.m.	Results.
Trafalgar	S. 4° 0′ E. 9280 or 8107 to leeward	N. 63° E. 5664	S. 67° W. 2155 or 402 to windw'd	Gain on St. Vincent 8509
Queen	S. 3 30 E. 9450 „ 8218 „	N. 79 E. 2811	S. 60 W. 3937 „ 257 „	„ „ 8475
Albion	S. 6 0 E. 10908 „ 9719 „	N. 80 E. 6863	East 3329 „ 3076 to Leeward	„ „ 6643
Vanguard	S. 0 30 W. 11816 „ 9853 „		N. 88 E. 3955 „ 1703 „	„ „ 8150
Canopus	S. 1 30 W. 12524 „ 10321 „	N. 86 E. 6401	S. 26 E. 2079 „ 2051 „	„ „ 8270
Rodney	S. 2 30 W. 12826 „ 10442 „		S. 81 E. 3109 „ 1820 „	„ „ 8622
Superb	S. 5 0 W. 13150 „ 10362 „		S. 47 E. 5050 „ 4740 „	„ „ 5622

A swell from the northward. See Fig. 6. Scale ½ inch to mile.

Trial of Sailing before the Wind, July 19th, 1

…h, a.m. Squadron in order of sailing; two columns; steering W.b.N. under all sail, wind easterly, water smooth. At 7h. 40m. made signal to make all possible sail. At 6h. p.m. signal to shorten sail and take stations. Rate of sailing from 6 to 8 knots.

Position of the Squadron, Bearings, and Distances in yards. *Distances from St. Vincent.*

		At 7h. a.m.		At 6h. p.m.		At Starting.	At Ending.		Result.	
1	Trafalgar	E.b.N.	1805	N. 55° W.	11030	Astern 1805	Astern	10104	Loss on St. Vincent	
2	Queen	E.b.N.	1056	N. 35 W.	4850	" 1056	Ahead	1056	Gain " "	
3	Albion	E.b.N.	3986	N. 88 W.	9140	" 3986	"	964	" "	4250
4	Canopus	E.b.N.	1591	N. 78 W.	9997	" 1469	"	2027	" "	4098
5	Rodney	N. 84° E.	2185	N. 75 W.	888	" 2043	"	861	" "	2904
6	Vanguard	N. 76 E.	4668	N. 78 E.	8570	" 4015	Astern	5570	Loss " "	1555
7	Superb	East	3096	N. 78 E.	9814	" 3086	"	9814	Gain " "	999

Memo.—The Queen, Trafalgar, and Albion steered considerably to the southward by which their sails drew better; the former having all her stay sails set. The St. Vincent did not set the lee clew of her mainsail, or main top-mast studding-sail.

Positions at Starting, wind E.b.N.; see Fig. 1. Positions at Ending, wind E.S.E.; see Fig. 2. Scale ½ inch to mile.

Course and Distance run W.b.N. 79 miles.

Trial of Sailing before the Wind, July 22nd, 1845. (Wind S.E. to S.S.E.)

At 10h. a.m. Squadron in order of Sailing, two columns, steering north-west under all sail, a light breeze from S.S.E., rate of sailing three knots; at 8h. 30m. p.m. flag ship shortened sail to allow sternmost ships to close.

Position of the Squadron, Bearings, and Distances in yards. *Distances from St. Vincent.*

		At 10h. a.m.		At 8h. 30m. h. m.		At Starting.	At Ending.		Result.	
1	Trafalgar	N. 45° E.	2418	N. 56° E.	8037	Astern 2418	Astern	5628	Loss on St. Vincent	3410
2	Queen	N. 45 E.	2074	N. 48 E.	6493	" 2074	"	4580	" "	2706
3	Albion	N. 45 E.	3150	N. 50 E.	6206	" 3150	"	6110	" "	2960
4	Vanguard	In Station								
5	Canopus	N. 26° E.	2205	N. 25 E.	5076	" 1188	"	4080	" "	3888
6	Rodney	N. 26 E.	3942	N. 40 E.	5855	" 3140	"	5555	" "	2715
7	Superb	N. 25 E.	4311	N. 40 E.	6533	" 4260	"	6533	" "	2273

Course and Distance run N.W. 17 miles; see Fig. 3. Scale ½ inch to mile.

EXPERIMENTAL CRUISE OF

Trial of Sailing, Saturday, July 26th, 1845.

At 9h. 30m. am. Squadron in close order, line of battle ahead; made general signal to chase to windward under all plain sail; tacking every two hours, wind variable from west to W.b.N ½ N.; at 3h. 30m. p.m. taken aback, annulled chase, and made signal to take stations; rate of sailing 5 to 7 knots.

Positions of the Squadron, Bearings, and Distances in yards. *Distances from St. Vincent.*

		At Starting.	At Ending.	Results.	
1	Trafalgar	S. 5° E. 570	S. 36° E. 3197	Lost on St. Vincent (to windward)	1574
2	Queen	S. 6 E. 1132	S. 65 W. 4852	Gained on " "	5609
3	Albion	South 1387	S. 16 E. 1336	" " "	13
4	Vanguard	S. 5 W. 2462	S. 64 E. 6277	Lost on " "	4821
5	Canopus	S. 5 W. 2993	S. 28 W. 4170	Gained on " "	2681
6	Rodney	S. 5 W. 3897	N. 60 E. 4616	Lost on " "	2017
7	Superb	S. 4 E. 4920	N. 60 E. 9230	" " "	7064

Positions at Starting, wind W.b.N. ½ N., see Fig. 4. Positions at Ending, wind W., see Fig. 5. Scale one inch to mile.

Trial of Sailing, Tuesday, July 29th, 1845. (Wind N.W.b.N.)

At 11h. a.m. Squadron bearing south, the leading ship distant about five miles, made general signal to chase to windward; a moderate and steady breeze from N.W.b.N., squadron under all plain sail, royals occasionally; St. Vincent under easy sail heading N.E.b.N.; at 3h. 30m. p.m. Trafalgar and Queen tacked by signal; and at 3h. 55m. Albion and Canopus tacked; at 4h. p.m. made the general recall, and signal to form the order of sailing.

Positions of the Squadron, Bearings, and Distances in yards. *Distances from St. Vincent.*

		At 11h. a.m.	At 3h. 30m. p.m.	At 4h. p.m.	Results.
1	Trafalgar	S. 4° 0′ E. 9280 or 8107 to leeward	N. 63° E. 5664	S. 67° W. 2155 or 402 to windw'd	Gain on St. Vincent 8509
2	Queen	S. 3 30 E. 9450 " 8218 "	N. 79 E. 2811	S. 60 W. 3937 " 257 "	" " 8475
3	Albion	S. 6 0 E. 10908 " 9719 "	N. 80 E. 6863	East 3329 " 3076 to Leeward	" " 6643
4	Vanguard	S. 0 30 W. 11816 " 9853 "		N. 88 E. 3955 " 1703 "	" " 8150
5	Canopus	S. 1 30 W. 12524 " 10321 "	N. 66 E. 6401	S. 26 E. 2079 " 2051 "	" " 8270
6	Rodney	S. 2 30 W. 12826 " 10442 "		S. 81 E. 3109 " 1820 "	" " 8622
7	Superb	S. 5 0 W. 13150 " 10362 "		S. 47 E. 5050 " 4740 "	" " 5622

A swell from the northward. See Fig. 6. Scale ½ inch to mile.

N.B.—The Vanguard's trial terminated at 3h. 15m. p.m., when she was S. 3° E. 5570 yards, but the distance she would have been to leeward at 4h. has been calculated with the allowance of her average rate of sailing this day.

Results in 5h. 45m. trial.—Queen, the weathermost ship, beat Albion 1169 yards, Canopus 1554, Rodney 1732, Trafalgar 2502, St. Vincent 2999, Superb 4580, and Vanguard 7065.

For Positions see Fig. 11. Scale ½ inch to mile.

Trial of Sailing, August 9th, 1845.

At 9h. 45m. a.m. squadron in "close order," "line ahead" about two miles on lee quarter; made the signal to "chase to windward; a moderate and steady breeze from N.N.W. ½ W., with a cross swell; all sail except royals set; at 10h. tacked together, Albion splitting her main topsail in stays, during the forenoon St. Vincent, Vanguard, and Superb set main, and Queen all royals and flying jib; at noon tacked together, in the afternoon Canopus and Rodney set fore and main royals and flying jib; at 2h. p.m. tacked again, at 2h. 15m. Rodney shortened sail to shift sprung main-top-gallant-mast; at 3h. p.m. made the signal to form the order of sailing, and shortened sail.

Position of the Squadron, Bearings and Distances in yards.

Distances from St. Vincent.

	At 10h. a.m.		At Noon.	At 2h. p.m.	At 3h. p.m.	
Trafalgar	S. 33° 45′ E. 3710 or to leeward	3696	S. 19° E. 2809	S. 10° W. 9579	S. 5° W. 2769 or to leeward	2304
Queen	S. 34 00 E. 3846	" 3826	S. 22 E. 3052	N. 87 E. 2525	S. 87 E. 1707	" 745
Albion	S. 57 00 E. 4319	" 4266	S. 19 E. 5186	S. 87 E. 6496	S. 83 E. 4609	" 2419
Vanguard	S. 20 00 E. 4113	" 4070	S. 12 W. 5609	S. 20 E. 4594	S. 18 E. 5045	" 4977
Canopus	S. 8 00 E. 4802	" 4502	S. 23 W. 5858	S. 6 E. 3195	S. 15 E. 2874	" 2801
Rodney	S. 8 00 E. 4481	" 4206	S. 16 W. 5109	S. 33 E. 2514	S. 45 E. 3662	" 3460
Superb	S. 4 00 E. 5174	" 4783	S. 16 W. 6076	S. 13 E. 5044	S. 8 E. 5557	" 5285

N.B. The Albion was 45 minutes shifting her main topsail, and Rodney had not finished her main top-gallant mast, when trial terminated; two-thirds, therefore, of their average gain per hour during the rest of the trial have been allowed them in calculating the result. St. Vincent carried away main-royal yard in the slings at 2h. 37m. p.m.

Angles of Inclination. At 11h. a.m.—St. Vincent 5½°, Trafalgar 4°, Queen 3½°, Albion 4°, Vanguard 3°, Canopus 5½°, Rodney 5½°, Superb 4½°. At 2h. p.m.—St. Vincent 6½°, Trafalgar 5°, Queen 6°, Albion 3½°, Vanguard 5°, Canopus 5½°, Rodney 6°, Superb 3½°.

Results of Trial, (in 5 hours.) Queen, the weathermost ship, beat Albion 1234 yards, Canopus 1380, Trafalgar 1389, Rodney 2335, St. Vincent 3081, Superb 3633, Vanguard 3988.

For Positions see Fig. 13.

Trial of Sailing, August 13th, 1845.

At 10h. 15m. a.m. Squadron except Rodney (shifting fore topsail yard) and Albion, and at 10h. 45m. Albion made all plain sail in chase to windward; a moderate breeze from S.E. ½ E., at times unsteady in force; water smooth. At 11h. and 11h. 28m. a.m. Vanguard, Canopus, and Superb tacked together, and Queen at 2h. 27m. and 2h. 43m. p.m. At 5h. 45m. made the recall, and bore up to close the leewardmost ships. Rate of sailing from 4. 5, to 5. 6, knots. For Positions see Fig. 14.

Position of the Squadron, Bearings and Distances in yards.

		At 10h. 15m. a.m.				At 5h. 45m. p.m.				Results in 7½ hours.		
1	Trafalgar	S. 73° W.	1401	to leeward	721	S. 87° W.	2397	to leeward	1694	Queen, the weathermost ship, beat		
2	Queen	S. 76 W.	2265	„	1260	S. 34 E.	1993	to windw'd	1903	Albion	208	to windward
3	Albion	S. 81 W.	5613	„	3518	N. 31 E.	3667	to leeward	732	Canopus	2661	„
(At 10h. 45m.)						(from which deduct 199)				St. Vincent	3193	„
4	Vanguard	N. 14 E.	4092	„	1933	N. 30° W.	12731	to leeward	12130	Trafalgar	4166	„
5	Canopus	N. 2 E.	3384	„	2198	N. 28 E.	6856	„	1666	Superb	10901	„
6	Superb	N. 6 W.	3085	„	2307	N. 31 W.	10988	„	10547	Vanguard	13390	„

The Rodney's angles were not taken, her distance when she made sail having been too great to ensure accuracy. In calculating the result for the Albion, the half of her "average gain to windward" per hour during the trial has been deducted from what she was to leeward at its close.

Inclinations at 11h. 30m. a.m.—St. Vincent 6°, Trafalgar 5½°, Queen 3½°, Vanguard 2°, Canopus 4½°, Superb 2°, Albion 3°.

Trial of Sailing, August 14th, 1845.

At 10h. a.m. Squadron made all plain sail in chase to windward; a light, unsteady, and gradually declining breeze from S.E.b.E.; water smooth. At 3h. 10m. shortened sail and formed the order of sailing. Rate of sailing from 2 to 5·5 knots.

Position of the Squadron, Bearings and Distances in yards. *Distances from St Vincent.*

		At 10h. a.m.				At 3h. 10m. p.m.				Result in 5 hours.		
1	Trafalgar	S. 39° W.	874	to leeward	80	S. 8° E.	1792	to windward	1193	Queen, the weathermost ship, beat		
2	Queen	S. 48 W.	2256	„	555	S. 39 E.	6426	„	6137	Trafalgar	5419	to windward
3	Albion	N. 74 W.	2722	„	2595	N. 31 W.	1974	to leeward	1785	Albion	5885	„
4	Vanguard	N. 34 W.	2850	„	2638	N. 42 W.	4056	„	3931	Superb	6627	„
5	Canopus	N. 53 W.	2908	„	2903	N. 22 W.	3526	„	2914	St. Vincent	6692	„
6	Rodney	N. 63 W.	2610	„	2592	N·23 W.	3200	„	2661	Canopus	6703	„
7	Superb	N. 60 W.	2646	„	2640	N. 62 W.	2586	„	2575	Rodney	6761	„
										Vanguard	7985	„

N.B. The Albion had been ordered to close Rodney, previous to the commencement of the trial, and Superb, Canopus, St. Vincent is supposed to have had a list to port of at least two degrees. For Positions see Fig. 15.

Inclinations at 10h. 30m. a.m.—St. Vincent 5°, Trafalgar 2°, Queen 2°, Albion 1¼°, Vanguard 1°, Canopus 3½°, Rodney 3½°, and Superb 2°.

Trial of Sailing, August 15th, 1845.

At 1h. 45m. p.m. Squadron made all possible sail in chase, steering south; wind north, a moderate breeze; water smooth. At 6h. 5m. p.m. made the recall and signal to take stations. Rate of sailing 6 knots.

N.B. In making sail, the Vanguard dropped a man overboard, and lost half an hour in rounding to, to pick him up, for which 352 yards, or the half of her average loss per hour, has been allowed in the result. For Positions see Fig. 15.

	Position of the Squadron, Bearings and Distances in yards.	At 2h. p.m.			*Distances from St. Vincent.* At 6h. 5m. p.m.			Result in 4 hours. Queen, the headmost ship, beat	
1	Trafalgar	N. 3° W.	1707	Astern 1704	North		Astern 5806	Albion	655
2	Queen	S. 53 W.	1651	Ahead 984	S. 22 W.	2608	Ahead 2409	Rodney	1220
3	Albion	N. 3 E.	2554	Astern 2551	N. 41 E.	2377	Astern 1781	St. Vincent	1425
4	Vanguard	N. 25 W.	3533	„ 3194	N. 8 W.	6316	„ 6248	Canopus	2258
5	Canopus	N. 64 W.	2514	„ 684	N. 46 W.	2209	„ 1517	Superb	4300
6	Rodney	N. 39 W.	4030	„ 3135	N. 45 W.	4266	„ 2930	Vanguard	4831
7	Superb	N. 31 W.	5174	„ 4419	N. 28 W.	7226	„ 6366	Trafalgar	5527

Trial of Sailing, August 22nd, 1845.

At 1h. 25m. p.m. Squadron (about a mile to leeward of St. Vincent) in "close order, line of battle ahead," and under all plain sail, tacked in "chase to windward;" a moderate breeze from S.W., and smooth water. At 5h. Squadron, except Trafalgar, tacked. At 5h. 35m. tacked again, shortened sail, and formed the order of sailing. For Positions see Fig. 18.

	Position of the Squadron, Bearings and Distances in yards.	At 1h. 25m. p.m.				*Distances from St. Vincent.* At 5h. p.m.		At 5h. 35m. p.m.		
	Trafalgar	N. 11° W.	2207	to leeward	993	N. 29° W.	5800	East 1464	to leeward	1153
1	Queen	North	2186	„	1371	S. 61 W.	2350	S. 22° W.	2543	to windward 1962
2	Albion	N. 18 E.	2248	„	1863	N. 21 E.	1766	N. 42 E.	1781	to leeward 1718
3	Vanguard	N. 46 E.	2452	„	2440	N. 15 E.	8443	N. 14 E.	8455	„ 6659
4	Canopus	N. 56 E.	2682	„	2675	N. 18 E.	3474	N. 17 E.	3472	„ 2839
5	Rodney	N. 64 E.	2854	„	2786	N. 73 E.	3145	N. 82 E.	3004	„ 2622
6	Superb	N. 74 E.	3548	„	3282	N. 51 E.	7496	N. 56 E.	8102	„ 8078

Angles of Inclination at 1h. 50m. p.m. St. Vincent 7°, Trafalgar 6°, Queen 3½°, Albion 3°, Vanguard 3°, Canopus 8°, Rodney 8°, and Superb 3°½.

Results in 4h. 10m. Queen, the weathermost ship, beat Rodney to windward 3169 yards, Albion 3183, St. Vincent 3333, Trafalgar 3493, Canopus 3497, Vanguard 7552, and Superb 8127.

Trials of Sailing, August 19th, 1845.

No. 1. At 9h. 45m. a.m. made the signal for "port division," being in "close order," and distant about 2½ miles on lee quarter, to "chase to windward." A fresh breeze from the northward, with N. Easterly swell; single reefed topsails and courses, fore and main top-gallant sails, jibs, and spankers set. At 11h. 30m. they tacked together. At noon Rodney tacked, and at 12h. 20m. the rest of the division. At 1h. 55m. observed Rodney heave in stays and let go her life buoy. At 2h. 20m. made the port division's recall. For Positions see Fig. 17.

No. 2. At 11h. 15m. a.m. made the signal for the weather division to "chase to windward." At 1h. 10m. p.m. Albion, 1h. 30m. Trafalgar, 1h. 40m. St. Vincent, and 1h. 48m. Queen tacked. At 2h. 45m. shortened sail and formed the order of sailing.

Position of the Squadron, Bearings and Distances in yards. — *Distances from St. Vincent.*

			At 11h. 15m. a.m.			At 2h. 45m. p.m.		
	1	Trafalgar	S. 14° W. 2769	to leeward	2409	N. 6° E. 1090	to windward	1016
No. 2.	2	Queen	S. 20 E. 3338	„	3329	N. 11 E. 1020	„	911
	3	Albion	S. 3 E. 3235	„	3072	N. 22 E. 1841	„	1451
			At 9h. 50m. a.m.			At 2h. 20m. p.m.		
	4	Vanguard	S. 22 E. 4774	to leeward	4722	N. 50 W. 2088	to windward	1674
	5	Canopus	S. 29 E. 4830	„	4664	N. 84 W. 2604	„	881
No. 1.	6	Rodney	S. 33 E. 5729	„	5408	N. 67 W. 1040	„	619
	7	Superb	S. 33 E. 5897	„	5568	N. 39 W. 1200	„	1086

Angles of Inclination

At 11h. 50m. a.m.	
St. Vincent	7°
Trafalgar	7½
Queen	6½
Albion	4½
Vanguard	6
Canopus	9
Rodney	7
Superb	4½

N.B. Rodney was hove to 25 minutes before the recall was made, 625 yards, the corresponding proportion of her average gain during the trial, has therefore been added in the result. Canopus had the 2nd reefs in, in all, and Trafalgar in fore and mizen topsails.

Trafalgar and Albion tacked to cross, at 2h. 25m.; neither theirs, nor the other intermediate angles are inserted for want of space.

Results of No. 1. Superb, the weathermost ship, beat Rodney to windward 2 yards, Vanguard 258, and Canopus 1109.

Results of No. 2. Albion beat Queen 283 yards, and Trafalgar 1108, dead to windward.

The following report relates to the last cruize of the Experimental Squadron.

St. Vincent, Plymouth, Oct. 10th, 1845.

SIR,—I have the honour to forward to you, for the information of my Lords Commissioners of the Admiralty, the diagrams of the trials of sailing of H. M. Squadron, under my command, and other documents mentioned in the enclosed schedule. In addition to which, a good trial was commenced on the 1st instant, by the Queen, Canopus, Albion, and Vanguard, in chase of the Daring, under all plain sail, and part top-mast and top-gallant studding sails; but the fog, which came on three hours after, prevented angles being taken to ascertain the exact result. The Queen, however, gained on her.

You will be pleased to acquaint their Lordships that we have had some splendid trials, with as heavy a press of sail as could well be carried; one beginning with close-reefed topsails and reefed courses, top-gallant masts struck; the next under treble reefed topsails, and another under double reefed topsails; and all these against a heavy head sea. In the latter, on the 7th instant, the day after the heaviest gale, the Rodney beat the whole fleet.

Nothing could be more easy in all the trials than the Queen and Albion, who never appeared to strain anything; indeed, all the Squadron proved themselves such fine ships, as to be incapable of being distressed by press of sail, except the St. Vincent.

Being perfectly satisfied with the result of the trials, that the Queen is the best ship, the Albion and Rodney next, Canopus and Vanguard much alike, Trafalgar weatherly, but slow, St. Vincent leewardy and crank; and as the weather appeared to set in fine, and not deeming that any further trial would benefit the service, I therefore bore up on the 9th instant, for this anchorage, which I reached, with the Squadron under my command, this day at 7h. 15m. p.m.

I beg to remark, for their Lordships' information, that all the Captains deserve the greatest credit for the seamanlike manner in which they made sail, blowing in the way it did, on the above mentioned occasions.

S. PYM, *Rear-Adm.*

EXPERIMENTAL CRUIZE OF LINE OF BATTLE SHIPS: *Method of determining the Gain and Loss of each Ship; By Lieut. Alfred Ryder, R.N.*

THE method given in the last number of the *Nautical Magazine*, p. 536, of deciding on the result of an Experimental Cruize, although it enables me to place the ships in the *Order of Merit*, does not assign to them numbers expressing their *amount of comparative merit*. This will be evident when it is remembered that the numbers allowed for each place are merely arbitrary.

This latter object will be gained in the following manner. In Running Free Trials, by ascertaining the distance run by (Pat. log) of the

observer's ship, and applying this to the small gain or loss of each ship. As the distance run will be a large constant, no great accuracy will be necessary.

EXAMPLE *off the Wind Trial.*

Run by Patent Log.	Ships' Names.	Gain or Loss by Diagram.	No. expressing the amt of comp. merit.	The same numbers reduced.	Remarks.
Yards.	Rodney		148125	148·1	
148125	St. Vincent	— 5245	142880	142·8	
By Common Log no other being on board.	Canopus	+ 500	148625	148·6	
	Trafalgar	— 16250	131875	131·8	
	Queen	+ 85	148210	148·2	
	Albion	— 320	147805	147·8	
	Vanguard	— 5640	142485	142·5	
	Superb	— 3225	144900	144·9	

If the diagrams are projected in the usual way, these numbers will be ascertained by measuring the runs of each ship.*

To obtain the numbers that indicate the amount of *comparative merit* in an *On a Wind trial*, the whole run by patent log must be ascertained as before, the angle the ship's head makes with the wind must be estimated, allowing for lee way; and from these data the gain to windward worked out as the side of a right angled triangle, the resulting number of yards gained to windward will form the large constant to which the small gain or loss of each ship will have to be applied. This method of arriving at the amount of the constant, may appear rough, but it is in reality much more correct than any other, for should I attempt to arrive at it by working out a dead reckoning, errors of considerable amount would be introduced, although varying in amount and direction. This will be evident if we take the extreme case of a shift of wind, bringing the squadron at the close of a trial to the same position that it occupied at the commencement, the result of the *dead reckoning*, would give the constant, no value at all; leaving the small gain or loss of each ship to indicate her amount of comparative merit, which would bear most unfairly on the losing ships. This source of error is avoided by calculating the gain to windward of the observer's ship, from the distance run, and the angle included between the ship's head and the wind, making allowance for leeway.

To ascertain the *constant*, no cognizance need therefore be taken of the variation in direction of the wind, and the consequent alteration in the course, while to arrive at the amount of small gains and losses, in the diagram, the greatest attention to this point is necessary. I would even carry it so far as to note the direction of head by the azimuth compass every five minutes, averaging the results for the hour.

Note.—In running free trials, if the ships' tracks have diverged much it would be perhaps as well to project them in the usual manner. The benefits of the method of projection, which I have followed, attach themselves almost entirely to *On a Wind Trials.*

Example on a Wind Trial.

Run by Patent Log.	Gain to windward	Ships' Names.	Gain or Loss by diagram	No. expressing amount of comp. merit.	Same number reduced	Remarks.
Yards 32744 By common Log no other being on board.	Lying within 5 ¼ points of the wind and making ¼ point leeway 17314 yd.	Rodney		17314	173 1	
		St. Vincent	+40	17354	173·5	
		Canopus	+2170	19484	194 8	
		Trafulgar	−1820	15494	154·9	
		Queen	+2750	20064	200·6	
		Albion	+2370	19684	196 8	
		Vanguard	−8300	9014	90·1	
		Superb	−7340	9974	99 7	

In future cruizes a column should be added, showing the results of each day's trial, which would contain as above the numbers expressing the amount of *comparative merit*, and these might be summed up for a final result. When I was attached to the Experimental Squadron I thought it only necessary to place the ships in the *order of merit*. This object is gained in the method adopted in the last number of this Magazine. The necessity of being able to arrive at the *amount of comparative merit*, was pointed out to me on my return by Capt. G. Fishbourne, R.N., and I have followed up his suggestion as above.

These numbers (which I have calculated for him for each day) afford the really useful information to the naval architect, as they are a direct test of the merit of the forms of the different ships composing a squadron. This subject will I believe be treated of at length in a pamphlet which will shortly be published by that officer.

I will merely add this by way of explanation to show the use of these numbers.

If a naval architect, or one who has studied the subject, has his ideas on it sufficiently formed to enable him to express an opinion (founded on scientific knowledge) of the probable qualities of ships; and if he can arrange in a series, numbers (derived from consideration of breadth, length, weight, areas of sails, &c.,) expressing what ought to be the comparative performances of each ship, then a comparison between the theoretical numbers, and those numbers derived from the actual results, will enable him to test his theory; and if anticipated results agree with those that have actually been obtained, he will be justified in claiming attention to his views.

Having accompanied the Experimental Squadron during its last cruize, and having employed myself during the trials in ascertaining the gains and losses of the different ships, I send you the following account of the method pursued (which I have not met with before,) thinking that it might interest some of your readers, who at some future time may be attached to a ship proceeding on a like service.

Before we left England I obtained through the kindness of one of the officers of the Dock-yard the heights of the trucks of the different ships above the hammock nettings. The hammock netting was preferred to the

water line for various reasons. Reference to a table of angles and distances calculated for their different heights will give the distance required.*

After the commencement of a trial, *Masthead Angles* and *Bearings* were observed at short intervals of about an hour of all the ships concerned. These were projected in a book devoted to that purpose. If the ships were *going free*, and therefore steering a course, the distance gained or lost was ascertained by letting fall perpendiculars from the two positions of the same ship on the line representing the course steered, the space included will be the distance required.

After the commencement of a trial, if the ship were *on a wind* and beating to windward, the distance gained or lost was ascertained by letting fall perpendiculars from the two positions of the same ship on to the line representing the direction of the wind; the space included will denote the distance gained or lost to windward.

On an average about six diagrams were projected every day. In the *Running free* trials these were projected on one sheet, but in the *On a Wind* trials, from the frequent small alterations in the direction of the wind and the complicated system of perpendiculars which were rendered necessary for every shift of wind, it was found advisable to project no more than two or three diagrams on the same sheet, the last was then pricked through to the next page. In this manner three or four pages were devoted to an *On a Wind* trial, while one was sufficient for a trial *Running free*. In the course of the cruize a large book was filled with diagrams and remarks. I shall proceed to explain the method pursued in the two cases of *Running free* and *Beating to Windward*.

It might at first sight appear a difficulty that the place of the observer's ship is retained in the same position, and that no account is apparently taken of her progress in the interim, but this will be removed when it is remembered that what she does in the interval whether she is sailing at the rate of 5 or 10 knots an hour is quite independant of her positive gain or loss on other ships, if bearings and distances are obtained, and this method of projection pursued. The being enabled *when making the diagrams* to neglect this feature of the race, greatly facilitates and simplifies the arrival at a correct result. The total gains or losses are found if the diagrams are projected on one sheet by measuring the distance between the feet of the extreme perpendiculars, or if on different sheets by adding together the small losses or gains, and the result is obtained in this shape.

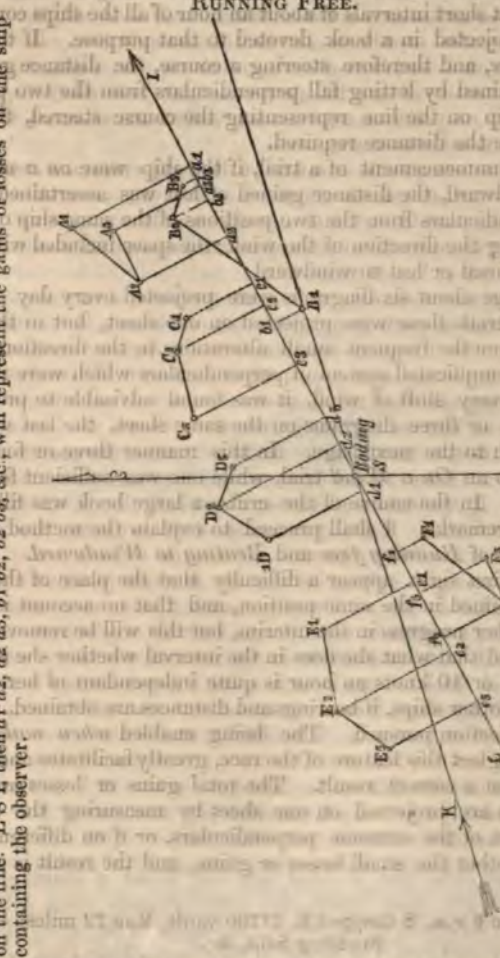
Interval 6 A.M. to 6 P.M. S dropped E 11760 yards, Run 72 miles. Sail, all Studding Sails, &c.

The advantage of viewing the run during the day in short intervals of an hour is that we are enabled by so doing to detect and sometimes to account for sudden gains and losses of different ships. Ships that gained more, or lost less, by the diagram, made during the dinner hour when the men were all on the lower deck, would probably be improved by having the weights permanently lowered, and *vicê versa*. The effect of any trimming is also made immediately apparent. But for these advantages the first and last diagrams would suffice in a *Running free* trial. In *On a*

* I hope shortly to be able to print a table of this description that will be adapted to observations for any ship.

Wind Trials the case is different, for, as the wind is always varying slightly in direction, the intermediate diagrams are absolutely necessary to the correctness of the result.

RUNNING FREE.



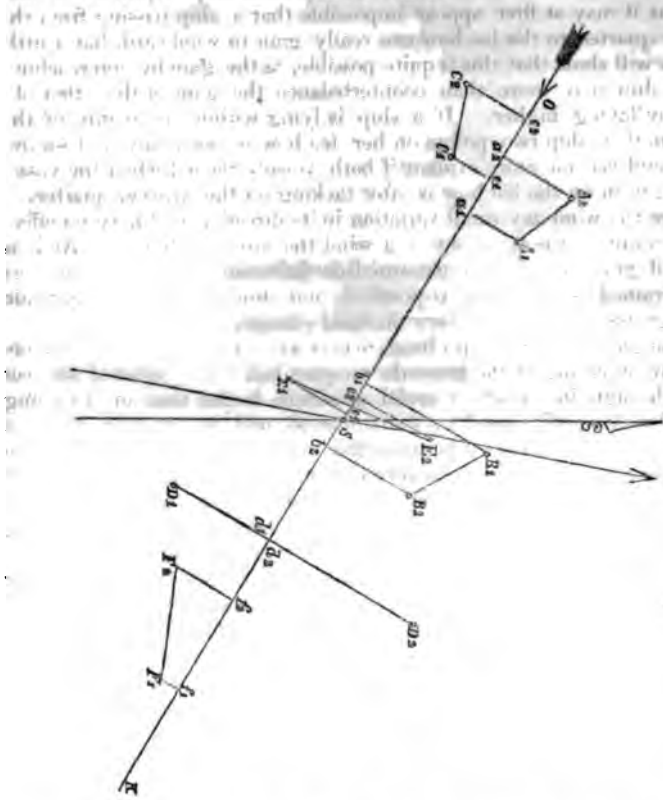
Let L S I represent the course steered, S the position of the ship in which the observer is placed, and K S the direction of the wind, which will be on the quarters of the ships. Let A1, A2, A3, B1, B2, B3, and C, represent the positions of A, B, C, &c., at the times 1h., 2h., 3h., p.m., projected by means of mast-head angles and bearings. Drop perpendiculars Aa_1, Bb_1, Cc, &c.; $A2, B2, C_2$, &c., a_2, &c., on the line. L S I, then $a1\ a2$, $a2\ a3$, $b1\ b2$, $b2\ b3$, &c., will represent the gains or losses on the ship containing the observer.

The line joining B_1 B_2 may appear to pursue a strange direction when it has been asserted that the ships were steering the same course. But it will be seen that though this difference in direction indicates that B_1 has by yawing or, by the effects of some error in the Compass caused by Local Attraction or otherwise, steered a rather more northerly course than S. yet the amount of this difference is very much magnified, for it must be remembered that the line joining the two stations of any one ship does not profess to represent the course steered in the interval. These are joined merely to prevent confusion.

When, as did occur in some of the Running trials, two ships, although

...dered to steer the same course diverge from one another, each may assert that she had steered the course. It is impossible to decide where the error rests, although its amount can be ascertained.

On a Wind.



Let O S K represent the direction of the wind, S L the course on the port tack, S the observer's ship, A1, A2, B1, B2, a1, b2, &c., as before.

As our object is to find at what rate one vessel is gaining or losing to *windward* of any other vessel, the perpendiculars must evidently be dropped on the *direction of the wind*, and not as in the other case on the *course* which would give it in favour of the forereaching ship, whereas by dropping them on the wind line we obtain the gain *to Windward* whether obtained by *forereaching* or *weathering*. The same arguments which have been advanced in the former case in defence of retaining the position of the observer's ship as if it was really stationary, apply with equal force to this. It will be seen that A has gained to windward (dead) of S a distance $a_1 a_2$, and B has lost on S a distance $b_1 b_2$; that C has gained on S a distance $c_1 c_2$; that D, although her position is materially altered with regard to S, in fact forereached very considerably, yet has neither lost nor gained to windward; that E has gained on S, $e_1 e_2$, although in so doing

she has passed from the *weather* quarter to the *lee* bow. These gains or losses collected from the different diagrams, and added together, give the total gain or loss of each ship on the ship of the observer, and then by simple addition or substraction on any other ship required. I imagine that it may at first appear impossible that a ship passing from the weather quarter to the lee bow can really gain to windward, but a little thought will show that this is quite possible, as the gain by forereaching of one ship may more than counterbalance the gain of the other obtained by laying higher. If a ship is lying within six points of the wind, another ship two points on her lee bow is not really to leeward. This would become more evident if both vessels tacked when the vessel that had been on the lee bow is after tacking on the weather quarter.

Before the wind any small variation in its direction will have no effect on the result of the trial, but on a wind the case is different. And as the small gains or losses are measured on the wind-line its direction must be ascertained as accurately as possible, and observations must be made and diagrams projected at every material change.

The angle which the ship's head makes with the wind will be ascertained by observing at the azimuth compass half the number of degrees passed through in stays.* Careful attention to the amount of coming up and breaking off, caused by shifts of wind, will enable us to obtain a mean wind for the interval between the observations, which should be taken every hour, and thence a very correct result, quite independent of the apparent positions of the ships, at the end of the trial. In two or three instances I have noticed that the most leewardly of two ships has, by a sudden shift of wind, or, which is more deceptive, by a slow progressive change in one direction, appeared to gain on a ship which really was more weatherly. In this case opinion unsupported by observations would have given a verdict in favour of the leewardly ship, while observation and projection would assign the victory without hesitation to the other. Any opinion of the result of a trial derived from the fact of a ship weathering another on a different tack must for the same reason be frequently erroneous.

In a fleet of eight sail we experienced no difficulty in ascertaining the bearings and distances of the different ships. One person observed the bearings of the ships visible from the azimuth compass on the poop, another connected by horizontal angles such ships as were not visible at that spot with one that was, and a third observed the masthead angles. The diagrams were made immediately after the angles were observed, so that soon after the end of a trial we were enabled to answer the Admiral's signal for results.

I shall now make a few obervations with regard to Experimental Sailing which prominently presented themselves during the trial.

1. The necessity that a person intending to give an acount of the trials, should keep himself wholly unbiased with respect to any particular ship, or class of ships. It may be almost impossible at times to subdue a feeling of gratification at weathering a ship which it had

* The Rodney's angle was generally about 116° she lay therefore very nearly within five points of the wind, and her yards braced as follows—Main Yard 19° to 24°; Fore Yard 24° to 28°.

been generally expected would have taken the lead. But when using the ruler and compasses it will be found advantageous to keep free of all party feelings. This frame of mind will be much assisted by making a rule to avoid stating, and, in fact, forming any opinion as to probable results.

2. The propriety, when starting ships in a race from *Line of battle*, of making the Fleet tack immediately. This rule applies equally to *On a Wind*, or *Off the Wind* trials, and is derived from this principle, that the line in which vessels are placed should be such that *no Ship should have a Vessel on her weather bow.* For if the weathermost ship is slower than the leewardmost it almost inevitably results that she acts as a check, which no vessel but one of great superiority can overcome. Once within the influence of her sails, the lee ship, though decidedly superior in point of sailing, is arrested in her onward progress, and must either rest content to hang on the lee beam or quarter of her competitor or sacrifice valuable ground by running away to leeward. This may be safely prevented by starting the ships on the other tack, for then each ship is on the weather quarter of the nearest vessel to leeward. No vessel can take the wind therefore out of another's sails without, by the distance she has ranged up, evincing that superiority of sailing which will enable her to pass to windward and ahead quickly, conferring on the lee ship an injury for only a short period of time, after which she can continue on her way unmolested.

3. The propriety of making the fleet *Tack together* by Signal. If this is not done, ships on different tacks will get miles from one another into different flaws of wind, by which the correctness of the result will be most materially affected. Also if this is not done, some ships will tack much oftener than others, and as a ship loses very considerably by performing this evolution her position at the end of the trial will be considerably injured. Any ship that tacks once more than the rest of the squadron, will, it may easily be seen, have probably to tack again. She will suffer therefore the loss of two extra tacks. By careful observation I found that a ship lost by tacking from 200 to 400 yards of dead weatherly gain, (the exact amount can be ascertained in each case, if the ships are not much separated.) By this I do not mean that she went astern, but that from having been steadily gaining to windward as long as she stood on, the stoppage resulting from tacking compared with the gain during the interval accruing to those ships that stood on, affected the position of the ship that performed that evolution to the amount named. This for two tacks amounts to from 400 to 800 yards, a loss which may affect the final position very considerably.

4. The propriety of all the ships being under the same sail, unless they absolutely cannot carry it. If after the commencement of a trial one ship sets stay-sails or a lower studding-sail, how difficult must it be to decide what part of the gain or loss of the ship making or shortening sail can be attributed to the impulse, derived or lost, by the alteration.

5. As the object of trials of Rate of Sailing is to ascertain the sailing qualities of the different ships, which sailing qualities may be said to depend on the shape of the bottom, position of the masts, arrangement of the weights, &c., it is evidently important that all other causes which *might* affect the sailing qualities of the ships should be avoided as much

of the men in making and shortening sail, or performing any evolution which necessarily, from its nature, affects the positions of the ships at the end of the trials.

The vessel which from being longer in commission, has her men more skilful, will of course have her yards sooner braced up, and tacks on board after tacking, topsails sooner up, and top-gallant sails set after reefing. All these, the results of efforts, on the part of the crew, apart from the qualities of the ship, tend to give undue advantage to the smartest ship. They should therefore be avoided as much as possible on trial days.* Exercise, it will no doubt be asserted, is one of the principle objects of an Experimental Squadron. I grant it, but will they not both be best gained by keeping them separate. If such evolutions are absolutely necessary, observations should be taken that would enable those officers who are making diagrams to omit, in the final result for the day, the gains and losses during the interval.

6. The propriety of making all trials *general trials.* The result of a general trial is obtained with as much accuracy, and with only a little more trouble than that of small trials of two ships, &c., and are much more valuable, for they and they alone can be introduced into the general summing up.

7. The necessity that ships before starting should have ascertained their Local Attraction. As this amounts in some instances to 2° or 3°, bearings of objects at a distance are seriously affected by a neglect of this precaution.

8. The necessity when royals are not set, of each ship carrying a small black ball at her masthead to mark her position. In hazy weather or when ships are distant no trustworthy observations can be got unless this precaution is adopted.

9. The necessity of some rule being adhered to with regard to the angle to which the yards are to be braced (when on a wind). I would suggest that the smallest angle to which the yards can be braced should be ascertained, and made known by signal to the Admiral, who would decide whether these angles should be retained; and, would by signal give directions for alterations when he thought it necessary so to do.*

For what results can be depended on, when on one day the main yard may be braced 4° or 5° sharper than the fore, and on the next be braced to only the same angle, no reason existing for the alteration, it having resulted merely from the stretching or shrinking of a brace, by which the position of the mark was altered; or the difference of opinion existing among the officers of the watches. The eye it will be found will not readily detect a difference of 3° or 4°, although 1° makes a sensible alteration in the reflection in a mirror.

The important effect on the speed of a vessel of the angle the yards

* In the observations made on board H.M.S. Rodney, we avoided as much as possible such source of inaccuracy. The first observation was made when all ships had made sail, and fairly started, but not before. Note was made of accidents, and allowance made for extra Tacks, &c.

* The order would probably be the result of a wish to try the effect of similar alterations in all the ships, or in consequence of the breeze freshening, head sea rising, &c., at which times there is a general opinion that yards should not be braced so sharp.

are braced to, has been noticed in several instances. I remember one in particular, where an alteration of 2° in the angle of the fore-yard made in a few minutes, a most sensible improvement in relative position. This fact shows the importance of some stringent rule being put in force obliging ships to act in concert on this point. Any opinion expressed by a constructor of a ship attached to an experimental squadron as to the angle the yards should be braced to, might of course be consulted within certain limits.

10. I would suggest that in a large experimental squadron no trimming should be permitted. If the effect of any alteration in the trim of a ship is required, she should be detached after the cruize is over with a ship of steady character, and permitted to alter her trim by moving given weights in certain accurately measured distances, at intervals of two or three hours, as convenient, but to allow some ships of a squadron to trim indiscriminately, must prevent the formation of any satisfactory opinion as to results.

For instance suppose it is wished to institute a comparison between the *Trafalgar* and the *St. Vincent*, two ships which, for the sake of argument, I will suppose to have obtained permission to trim, and which permission has been understood to mean at discretion. On one day a greater difference is perceived in the relative gains of the two ships, but as both have trimmed, who can tell whether one has been benefitted by her trimming and the other remained the same, whether both have been benefitted but one much more than the other, or both injured, but one more than the other. In fact when trimming is permitted I contend that no sufficient amount of dependance can be placed in the results. It would surely be much more satisfactory to the builders themselves, and to the Admiralty, that after vessels are once stowed for sea service no alteration should be permitted, not even a gun displaced, but the vessel allowed to rise according to the natural consumption of provisions and stores. But if trimming is allowed, its exact amount in weight and distance moved, ought at all events to be made known at the end of the trial.

11. As the amount of heel, if obtained merely by the mean of two or three observations cannot be depended on, and as this element is connected with one of the most important features in the character of any class of vessel, viz., their stability, too much attention cannot be paid to it. I would suggest therefore that the mean of a preconcerted number of least inclinations (8 for instance) be indicated by signal, and also the mean of 8 greatest inclinations and the interval of time in which the 16 vibrations were completed. The observations to commence at the dipping of the signal for inclinations. By this means all the necessary information connected with the stability of a ship under the ordinary circumstances would be gained, and the possibility would be avoided of one ship giving for her angle of heel the angle of least inclination, another that of the greatest, and another, as we did in the *Rodney*, the mean of the two; no valuable result can of course be arrived at while such different modes of proceeding *may* be followed: where there is much pitching or scending the same description of observations may be made with a fore and aft pendulum, and both should be registered hourly.

The clinometer that was issued to the *Rodney* would not register,

until the amount of motion exceeded five degrees; this fact not only prevented it from being of any use when the motion was less than that, (which was the case throughout the cruize except on two or three days) but led us to suspect that even the more extended motions might not be correctly registered from the amount of friction that it was necessary for the pendulum to overcome, before the instrument became sensible; there might however have been some fault in the construction of the instrument supplied to the *Rodney*.

12. May we not hope that a seven weeks' cruise in the summer months will afford opportunity for a greater number of trials than were obtained during July and August of this year.

If Friday forenoon is devoted to exercise at quarters, and Friday afternoon to boats, there would still remain five days in each week, and out of each day two good trials, and an hour's exercise at any required evolution could easily be obtained. If all sail was made for an *Off the wind* trial at daylight (the watch and idlers would easily do this) after which the decks could be washed, and the usual routine of the service carried out, and if at ten or half-past ten the headmost ships were ordered to heave to, by eleven o'clock the squadron would be sufficiently closed to allow the hour between eleven and twelve to be devoted to any evolution, with the spars, sails, &c., that might be desirable, hauling to the wind a few minutes before noon to allow the sails to be trimmed by dinner time, from twelve to five a good *On a wind* trial would be obtained, and two good boards during the night would bring the squadron back or very nearly back to their cruizing ground, by this means we should have during a seven weeks' cruize, seventy good trials, or allowing for circumstances such as calms, &c., there would be at least finety a number that would at all events enable the Admiralty more easily to form an opinion as to the capabilities of the different ships. The amount of exercise I have named, particularly if it was known that the intervals were carefully noted, would prove very beneficial to the young sailors, who form so large a portion of the ships' companies of the squadron.

In all that I have written on the subject of experimental cruizing, my sole aim has been to introduce to notice such systematic arrangements as would render the results more worthy of the attention of naval architects. The knowledge of the architect must receive increase from the practical information and experience of the sailor, neither can advance without the other. But theories cannot be tested without careful experiments. Arguments can be grounded only on facts that are deserving of credit from the accuracy with which they have been registered.

May not the want of progress in knowledge of the principles of naval architecture be owing to the paucity of good facts with which the naval architect may have been supplied?

I have not presumed to advance my own unsupported ideas on this subject, until I had corroborated them by reference to officers of rank in the navy, some of whom were attached to the squadron, and whose opinion, did I feel myself at liberty to mention names, would I am sure give weight to my suggestions. The use that may be made of the results of this or any other experimental squadron, is a subject that I have left in other and better hands, fully confident that unless the primary object of procuring "true facts" is obtained, naval architecture stands but a poor

chance of keeping pace with the rapid strides made by its sister sciences.

If the effect on the reader of perusing this article has been to gain him over to the opinion of the necessity of introducing a more accurate register of the proceedings of an Experimental Squadron, my chief object will have been gained, for I shall then hope to see orders issued by the Authorities, enforcing a more exact mode of conducting and registering the results of an experiment of so expensive a nature as such a squadron must have been.

I am, &c.,

ALFRED RYDER.

Royal Naval College, October 18th, 1845.

NAUTICAL NOTICES.

VICTORIA ROCK *of nine feet on the Gravel Bank off the North Coast of Anglesea.*

[IN our last number we expressed our suspicions of the existence of a rock off the north coast of Anglesea, by the Queen Victoria steamer, having struck on something off that coast in her voyage from Dublin to Liverpool. Commander Robinson in H.M.S. *Shearwater* having been directed to search for it, has succeeded in finding it on the Gravel Bank, on which the least water previously known was 3½ fathoms. The following is an extract from this officer's report to the Hydrographer to the Admiralty.]

"I have the honour to inform you that I yesterday went in search of the rock on which the Queen Victoria steamer struck; and found it to be a small rocky head *on* the Gravel Bank, on its north-east margin. We find only 9 feet on the shoalest part. I left a small barrel buoy on the spot, but it is desirable a large one should be placed without delay, or the rock blasted and levelled some feet, as it certainly is very much in the track of vessels. It is a very small head with 9 fathoms close to on the north-east side, and 4 and 5 fathoms to the south-west, the overfall of the bank is always perceptible, except at slack water. I have been enabled thus early (the *Shearwater* being in dock) to forward the result of my search through the kindness of Commander Fraser, Agent of the Packet Establishment, who placed at my disposal the Sprightly, Mail-packet for the purpose. I hope to be able to return to the Clyde by Saturday next.

"I have the honour, &c.,

"CHARLES G. ROBINSON.

"*To Captain Beaufort, R.N.*" "*Commander.*"

The following marks and bearings give the position of this rock:—

Cemaes Mill a quarter of a point open East of the Beacon bearing S.E. ¾ S. Kemlyn Mill touching east end of Kemlyn Farm bearing South. High-water of Henborth Point in one with Pencarn Beacon.

[We understand that a chequered black and white buoy has been promptly moored half a cable's length from this rock by the Trinity House.—ED. N.M.]

TEIGNMOUTH HARBOUR LIGHTHOUSE.—Notice is hereby given, that the Lighthouse, which has been for some time past in the course of erection, on the south-west end of a certain place, called the Den, at Teignmouth, in the county of Devon, and on the northern side of the entrance to the harbour of

Teignmouth, under the direction of the Teignmouth Harbour and River Teign Improvement Commissioners, is now completed, and that the light therein, with the sanction of the Trinity Board, will be first exhibited on the evening of Saturday, the 1st day of November next, from sunset to sunrise.

The Light which will be of brilliant gas, and will appear red in all directions, will be fixed and burn at an elevation of 31 feet 2 inches above the level of high water mark at ordinary spring tides.

By compass bearings, Hope's or Bob's Nose bears S.b.W. ½ W. distant 6 miles, and Streight Point, near the entrance to Exmouth harbour, E.b.N. also distant 6 miles.

By order of the said Commissioners,

October 1st, 1845. P. Pearce, Clerk.

Port of Bristol.—The Town Council held a special meeting, on the 18th of September, to consider the propriety of purchasing the Dock property, the assigned value of which, including improvements in hand, according to Mr. Bernard (Merchant and Shipowner) is £280,000; and, further, in the event of redeeming their control over the port, whether it would be advisable to lower the dues, or make the port a free one. It appears that the mean annual return from Dock Dues is £24,000, said to be principally derived from steamers.

The propriety of the purchase was decided in the affirmative, and it is to be hoped that there will be no delay in effecting it, as there are rumours abroad that Milford Haven is likely to become the entrepôt of the great inland manufacturing towns, by means of railroads, in which case Bristol would miss the export, or back freights, which may come to her by prompt measures.

R. Bright, Esq., of Ham Green, as a merchant, in a published letter, has proposed that a considerable portion of the sum required, be raised among the merchants themselves, shipowners, &c., by the subscription of £500 each. This is the proper principle to act upon; those who are to benefit most should be foremost. However, let the transfer be effected as it may, the case of Bristol will remain a beacon to future citizens, not to allow their desire for alteration to lead to the mortgage of their rights over their port to a company,—for such has been the bane of this ancient and once *second* port of traffic of England.

Lightning Conductors.—*Mr. Snow Harris's Theory.*

Calcutta, August 1845.

Sir.—Mr. Snow Harris in one of his papers on Lightning Conductors for ships observes, that "one fact is worth a thousand theories or loose opinions," and a little further on says, that if any serious injury has arisen to a sailor, leaning against a mast it must have been when the mast was *not* fitted with a Conductor, implying of course that with a Conductor the man would have escaped serious injury. The following fact will I think go far to establish the truth of what Mr. Harris advances.

During the months of April and May, south-westers accompanied by torrents of rain with heavy thunder and lightning are frequent in Bengal. Last year, in which of the two months I do not now remember, one visited Calcutta, the centre passing nearly over the fort. It came on about half-past three in the afternoon. The gusts of wind were tremendous, the rain very heavy and the lightning and thunder terrific; the crash following instantaneously the descent of the electric fluid. A sentry box built of substantial brick and mortar, on the ramparts was struck on the Apex, the fluid passing down inside; the sentry however escaped, for it was truly an escape; he had

taken refuge when the storm commenced and stood quietly inside with his musket at the order, the bayonet with the muzzle resting on his shoulder. The lightning took the point of the bayonet, (breaking as it was described to me, but I suppose) *fusing* it about an inch and a half, ran down the barrel to the stock, which it shattered to pieces, and thence into the earth. The only injury the sentry received was being slightly singed where the iron had been in contact with his body, for his arm and hand which rested on the back of the musket were not touched. I did not see the man, but Colonel Warren the Town and Fort Major of Fort William, assured me the injuries were so trifling that the man was again at his duty in three or four days.

This is a fact which you may think worthy of publication in the *Nautical Magazine*.

I am, &c.,

THOMAS SEWELL,
Major Bengal Army.

P.S.—I was writing in my office at the time, about 600 yards from the spot, and felt convinced that some place had been struck, the particulars however I did not learn till the next day.

[As this is a fact tending to illustrate an important subject highly interesting to seamen, as well as Mr. Snow Harris, we have taken the liberty of adding the Author's name. It fully confirms that gentleman's theory of protection being given where the conducting means are perfect, and possibly the crooked part of the bayonet at the muzzle of the musket, offering more difficulty to the free and rapid passage of the electric fluid than the straight barrel, may account for his being singed about the shoulder. Mr Harris however will no doubt make his remarks on the subject.—ED.]

COALING AT MADEIRA.—For the information of steam vessels coaling at Madeira, we may apprise them that Mr. James Taylor, merchant, supplies all steam vessels, H.M. ships included, with the best steam coal, with the utmost possible dispatch, at Funchal. A white flag with St. George's cross indicates the Coal Store on the beach, and steam vessels intending to coal should bring up as near to it as possible. The flag is always hoisted over the Coal Store, adjoining Banger's Pillar, when coaling from the beach is practicable. No signal is hoisted at the Coal Store when the surf on the beach prevents coaling in the regular way; in such cases, coals will be shipped from the Pontinha, behind the Loo Rock.

Bearings for bringing up steam vessels in the port of Funchal, recommended by Capt. Hope, H.M. st. v. *Firebrand*, in March, 1845, requiring to coal from beach store,—Loo Rock W.b.N. ½ N.; Church Tower N.b.E. ½ E.; distance from beach ¼ mile; depth of water 14 fathoms; bottom mud. If to coal from colliers,—a short distance to leeward of them, and the coal boats will drop down with their loads. If to coal from Pontinha, when there is too much sea to coal from beach in westerly winds,—the Mount Church in one with Cathedral Church Tower; Loo Rock W.b.N., keeping the extreme of the land to the westward open to the south of it; distance from Loo Rock ¼ mile; depth of water 10 fathoms; bottom sand.

A Wheft hoisted at the fore indicates order to send off coals. This when shown by steamers in sight of the port, will bring coals alongside as soon as they anchor. Collier ships, when desiring to coal from them, will hoist it at the fore. Proper boats, with able, active men, coaling bags, &c., in constant readiness to ensure dispatch, and put on board 120 to 160 tons of coals per day. All the coals are stored under cover to prevent their deterioration.

The Merchant Seamen's Crimpage Bill.—*An Act for the Protection of Seamen entering on board Merchant Ships.*

(Concluded from p. 554.)

Penalty for Receiving Remuneration for Hiring Seamen.

VIII. And be it enacted, that if any person shall demand or receive from any seaman, or from any person other than the owner, part owner, master or person in charge of a merchant ship, or the ship's husband, requiring seamen, any remuneration whatever, either directly or indirectly, for and on account of the hiring, supplying, or providing any such seaman, he shall forfeit for every such offence a sum not exceeding five pounds.

Persons not to be admitted on Board Merchant Vessels without Permission.

IX. And be it enacted, that it shall not be lawful for any person (other than any officer or person in her Majesty's service or employment) to go and be on board any merchant vessel, arriving or about to arrive, at the place of her destination, before or previous to her actual arrival in dock, or at the quay, or place of her discharge, without the permission and consent of the master or person in charge of the said vessel; and if any person (other than as aforesaid) shall go and be on board any such vessel before or previous to her actual arrival in dock, or at the quay or place of her discharge, without the permission and consent of the said master or person in charge of the said vessel, he shall for every such offence forfeit and pay a sum of money not exceeding twenty pounds; and for the better securing the person of such offender the master or person in charge of the said vessel is hereby authorised and empowered to take any person so offending as aforesaid into custody, and to deliver him up forthwith to any constable or peace officer, to be by him taken before a justice or justices, to be dealt with according to the provisions of this act.

Penalty for soliciting Sailors to become Lodgers in Houses of Unlicensed Persons.

X. And be it enacted, that if any person shall, on board any merchant ship, within twenty-four hours of her arrival at any port as aforesaid, solicit any seaman to become a lodger at the house of any person not so licensed as aforesaid, and letting lodgings for hire, or shall take from and out of such ship any chest, bedding, or other effects of any seaman, except under the personal direction of such seaman, and without having the permission of the master or person in charge of such ship, he shall be liable to forfeit and pay for every such offence the sum of five pounds.

Penalty for Receiving Remuneration.

XI. And be it enacted, that if any person shall demand and receive of and from any seaman payment in respect of his board or lodging in the house of such person for a longer period than such seaman shall have actually resided and boarded therein, or shall receive or take into his possession, or under his control, any monies, documents, or effects of any seaman, and shall not return the same, or pay the value thereof, when required to do so by such seaman, after deducting therefrom what shall be justly due and owing, in respect of the board and lodging of such seaman, he shall forfeit and pay a sum not exceeding ten pounds over and above the amount or value of such monies, documents, or effects, after such deductions as aforesaid, which shall be adjudged to be forthwith paid to such seaman under the conviction by the justices before whom such offence shall be heard and determined.

Recovery and Applications of Penalties.

XII. And be it enacted, that all penalties and forfeitures imposed by this act shall and may be recovered, with costs, by summary proceedings before any two justices of the peace, residing in or near to the place where the offence shall be committed, or where the offender shall be; and if the sum imposed as a penalty or adjudged to be paid as aforesaid by any such justices shall not be paid, either immediately after the conviction, or within such reasonable time as such justices shall at the time of the conviction appoint, it shall be lawful for the justices to commit the offender or offenders to the common goal or house of correction, there to be imprisoned only, or to be imprisoned and kept to hard labour, according to the discretion of such justices, for any term not exceeding six calendar months, the commitment to be determinable upon payment of the amount and costs; and all such penalties and forfeitures shall be paid and applied in manner following; (that is to say) one moiety of such penalty shall be paid to the informer or person upon whose discovery or information the same shall be recovered, and the residue thereof shall be paid to the Seaman's Hospital Society: provided always, that in cases of complaint made by or on the behalf of any seaman under this act, the evidence of such seaman shall be received and taken notwithstanding he may be interested in the matter: provided also, that such seaman shall not in any such case where he shall have been so examined receive any part of any penalty to be imposed, but only such sum as the magistrates before whom the case shall be heard shall adjudge him to receive for any monies or effects which shall appear to have been deposited by him with any such person as aforesaid.

Form of Conviction.

XIII. And be it enacted, that the justices before whom any person shall be summarily convicted of any offence against this act may cause the conviction to be drawn up in the following form of words, or in any other form of words to the same effect, as the case shall require; (that is to say,)

"Be it remembered, that on the day of in the year of our Lord at in the county of [or riding, division, liberty, city, &c., as the case may be,] A. O. is convicted before us [naming the justices,] two of her Majesty's justices of the peace for the said county, [or riding, &c.] for that he the said A. O. did [specify the offence, and the time and place when and where the same was committed, as the case may be]; and we, the said justices, adjudge the said A. O. for his said offence to forfeit and pay the sum of [here state the amount of the fine imposed, and, when necessary, add the words 'over and above the sum of £ , which we, the said justices, do hereby adjudge to be forthwith paid to the said E. F. [the seaman], the same being the value of monies, documents, or effects of the said E. F. received by or taken into the possession or under the control of the said A. O.,]; and we, the said justices, do also adjudge the said A. O. to pay the sum of for costs, and in default of immediate payment of the said sums of to be imprisoned in the for the space of unless the said sums shall be sooner paid [or, and we order that the said sums of shall be paid by the said A. O. on or before the day of]; and we direct that the sum of , part of the said penalty, together with the said sum of for costs, shall be paid to C. D. [the party informing], and the residue of the said penalty shall be paid to the Seaman's Hospital Society. Given under our hands, the day and year first above mentioned."

No Certoriari, &c.

XIV. And be it enacted, that no such conviction shall be quashed for want of form, or be removed by certoriari or otherwise into any of her Majesty's superior courts of record; and no warrant of commitment shall be

held void by reason of any defect therein, provided it be therein alleged that the party has been convicted, and there be a good and valid conviction to sustain the same.

Explanatory Cause.

XV. And be it enacted, that the words "merchant ships" inserted in this act shall be understood to include every description of sea-going, trading or passage vessel, lying and being within the United Kingdom of Great Britain and Ireland.

Commencement of Act.

XVI. And be it enacted, that this act shall come into operation at the following times; (that is to say) on the first day of September, so far as respects the power of licensing herein-before given to the Lords of the said Committee of Privy Council, and on the first day of November, so far as respects all other enactments of this act.

Alteration of Act.

XVII. And be it enacted, that this act may be amended or repealed by any act to be passed during the present session of parliament.

Tidal Harbour Commission.

(Concluded from p. 547.)

The River Blyth and Harbour of Southwold.

In the northern portion of Your Majesty's dominions we have seen that although great want of vigilant control is manifest, and that the landed, and fishing, and corporation interests have too often been preferred to the rights of merchants and ship-owners, and to the general interests of navigation, still the spirit of commercial enterprise has finally broken through the barrier, and by degrees has carried out, to a certain extent, improvements in some of the harbours. In the southern ports, which we have now to notice, we regret to report that those interests have proved too powerful, and that the consequence has been in several cases a dry bar, a deserted port, and all but ruin to the merchant and ship-owner.

The river Blyth and the port of Southwold on the east coast of Suffolk offer a strong proof of the correctness of these statements.

It appears in evidence that the whole area formerly covered by the spring-tide waters of the river Blyth was about 2,000 acres, and that by means of several embankments, that area has been reduced to 450 acres, or less than a quarter of the whole extent. It likewise appears that over more than half the original area the depth at high water ordinary springs would be two feet; that in the event of high springs it would be four feet, and in north-west gales or equinoctial springs, fully six feet. We have thus the means of computing roughly the quantity of water which has been excluded by these embankments; and taking the lowest estimate, or that of a common spring tide, it gives, in round numbers, 150 millions of cubic feet, or 4½ millions of tons on every tide; and as three such tides occur at each new and full moon, or seventy-eight in a year, some notion may be formed of the enormous loss of scouring power sustained in consequence of these embankments.

The merchants of Halesworth (the great corn mart of this part of the county of Suffolk) had repeatedly urged the propriety of deepening the bed of the Blyth; yet nothing was done till an Act of Parliament was obtained in 1830, and though under direction of the present harbour Surveyor, the lower part of the harbour has been somewhat improved, yet, as the Act did

not touch the embankments, the bar has been at times since that period dry at high water, so that no vessel could get in or out.

As a general, although not universal principle, no cause has operated more extensively to injure the entrances of harbours throughout the United Kingdom than excluding the tidal waters from lands below the level of high-water, which served as natural reservoirs for the flood tide, and were the means of affording a valuable scouring power during the ebb. Nor does any subject more deserve the vigilant attention of Your Majesty's Government, or of those entrusted with the conservancy of our harbours, than such encroachments, which are usually made quietly and gradually, and when once completed are difficult afterwards to remove.

It appears in evidence that, with the exception of two, the Southwold Harbour Trustees are self-elected; they consist of landed proprietors, merchants, &c., but only a single sailor.

We have thought it right to enter into the above details, since Southwold is entirely dependent upon tidal waters for existence as a port, and since the value of the daily tidal scour in all our harbours does not seem to be sufficiently appreciated; nor can any case more strongly prove the duty of jealously guarding against similar encroachments.

Harwich Harbour.

The ancient and well-known port of Harwich is an estuary formed by the junction of the rivers Stour and Orwell, and contains about 700 acres of good anchorage. The value of this port was well understood during the last war, and will be so again when we have occasion for another North Sea fleet. It was from Harwich that the fleet was watered by transports; and that all its vessels obtained supplies at the naval yard; here not less than 60 ships of war have been built, 15 of which were two-deckers; and the fishing vessels belonging to the port some years since were estimated at 3000 tons, and employed 500 of our most hardy seamen.

Its general depth of water, its wide extent, its perfect shelter, its easy access by night or by day, in all weathers, and in all states of the tide, render Harwich the only harbour of refuge, properly so called, between the Thames and the Humber.

Yet it will be seen from the evidence taken before the Harbour of Refuge Commission of 1844, that this harbour, which in easterly gales has given shelter to 500 sail of shipping at once, has been suffering a rapid deterioration during the last thirty years from the removal of the cement stone at the foot of Beacon Cliff and Felixstow Ledge. The consequence is, while the sea has gained considerably upon the Essex shore, threatening to break through the isthmus, that Landguard Point, on the opposite side, has advanced 500 yards upon the sea during the same period, thereby blocking up the chief entrance into the harbour; and so much so, that where, in the year 1804, there was a channel seven fathoms deep at low water, there is now a shingle-beach as many feet above high-water mark.

But the attention of Your Majesty's Government having at length been called to this state of neglect by the Report of [illegible] mmission, it appears that immediate measures are to be taken to [illegible] port to its former value as a Harbour of Refuge.

Rye Harbour.

Rye, one of th[illegible] on the coast of S[illegible] the bight of a bay, about three [illegible] led by Dungene[illegible] and [illegible] Head to the west[illegible] rbour is in the [illegible] of the rive[illegible] he junction o[illegible] Brede, t[illegible] he north-we[illegible] which c[illegible] of low-wate[illegible]

of construction on the eastern side of the harbour, and an embankment of earth has been thrown up on the western side, leaving an entrance between of 290 feet in width.

The average rise of spring tides at the town of Rye is 14 feet, at the pier-head 17 feet, and in the bay 23 feet, or greater than anywhere on the south-eastern coast of England. At low-water the harbour is left dry.

For several miles round the town of Rye, and immediately adjacent to the harbour, there are large tracts of marsh land, the greater part of which are owned by proprietors residing in the neighbourhood. Over a great portion of this plain the sea was formerly accustomed to flow at every tide, and thus formed a considerable back water, which operated as a scour to the harbour of Rye, and kept the channel open. The proprietors, however, uncontrolled by any guardian of the port, began by degrees to exclude the tide, and no steps being taken to restrain their encroachments, they obtained an Act of Parliament, erected dams and sluices across the rivers a short distance above the town, and finally excluded the tidal waters.

By these means hundreds of acres of marsh have been reclaimed, while the harbour, deprived of its back waters, yielded to the mass of sand and shingle which rolled in with every wave, and which have now nearly obliterated the appearance of a channel.

Three rivers drain this tract of country; and had there been no obstructions in their channels, they would have afforded an ample reservoir for tidal waters; and indeed would still do so, judging by the effect produced when, in March 1812, owing to a high tide blowing up Scot's Float Sluice, the sea flowed freely to Robertsbridge, fifteen miles up the country, and the returning ebb, as it appears in evidence, so scoured the harbour that vessels drawing 16 feet water could get up to the town.

Landed interest, however, again prevailed, and in the following year the sluice was re-built. In 1830, a jury at Croydon found "that Scott's Float Sluice, as then erected, was a nuisance," and alterations in it were directed to be made; these alterations not being made, it appears that the people assembled and pulled the sluice down.

An enquiry took place which led to the Acts of 1830 and 1833, under which, one of the Rye Commissioners was named on the part of the Admiralty; and we learn from his evidence, that since his appointment, an extensive creek, called the Nook, to the westward of the entrance, and covered every high water, has been in great part dammed out; and upwards of 700 acres of marsh land, lying on both sides the river, and overflowed by the sea to the depth of 3 feet, has been embanked, thereby losing the scour over the bar of 30 million cubic feet of water on every spring tide.

It appears from the reports of engineers and others, that between the years 1724 and 1787, a sum of not less than £200,000, raised by a passing toll on shipping, was expended in vain attempts to form a new harbour about two miles to the westward of the present outlet to the sea, but which, after those 63 years' waste of time and money, they were compelled to abandon.

We have dwelt longer on this subject than at first sight it would seem to warrant, but the case of Rye is extremely instructive, as bringing broadly into view the apparently antagonist principles of the local and the shipping interests, and the absolute necessity of some controlling power to protect the latter. There is a still more important consideration. Rye is situated on a part of the coast of Your Majesty's dominions, where a harbour is most wanted; and where it would be of the greatest benefit to our shipping, whether for steamers to obtain fuel in the event of hostilities, or, which is of far more consequence, for the safety of our merchant vessels in time of peace. And when we consider the capabilities it offers, the abundance of level land on either side of the river fit for docks or basins, the great value of a 23 feet rise of tide in the bay, and the extent of back water at command, we are led to believe that skilful engineering would readily turn these advantages to account for national benefit.

The Rivers Forth, Dee, &c.

In addition to the examples we have given in detail, numerous instances of encroachments, of neglect, and of want of efficient control, have come before us in the course of our enquiries. For instance, on the banks of the Forth, near Stirling, large enclosures of marsh land have been formerly effected. Similar embankments, but to a much greater extent, have been carried out on the level lands by the side of the Dee, near Chester. At Whitby, we learn that it is a common practice to throw the refuse of the town behind the west pier head, which the next flood tide washes into the harbour. At Bridlington, great delay has occurred in completing the works for the improvement of the harbour, while a passing toll to pay for them is levied on shipping. So unimportant, too, is this harbour considered, that a railway company recently inserted it in its schedule of property to be taken, amidst houses, fields, &c., without deeming the transfer of a public harbour of sufficient consequence to give it a clause in their Bill.

At the Spurn Point six vessels, of 50 tons each (paying 1*l.* a load to the Lord of the Manor), are daily engaged in carrying off the shingle from the beach, at the rate of 50,000 tons a-year, to mend the roads in Yorkshire and Lincolnshire. As it appears from the Report that the Spurn Point has lost half its breadth within the last twenty years, this removal of shingle may eventually endanger the lighthouses as well as the anchorage of Hawke Roads.

At Portland, ballast is commonly thrown overboard with impunity. Similar complaints come from Fowey and from Falmouth; and with the addition from Milford Haven, that the water-bailiff remonstrates in vain, and has practically no power to enfore his commands.

We have the evidence of engineers, and of the Admiralty surveyor, that the rivers Lune and Ribble, and Dee, are all susceptible of very great improvement; the Thames, even the high road of the commerce of this great empire, for want of systematic conservancy and efficient dredging, has shoals with only 11 feet depth over them, even as low as Barking Reach, which prevent more than half the loaded vessels that come up to London from passing at low water spring tides; in short, there is hardly a harbour we have inquired into that, under efficient control, might not be in a much improved state.

We now proceed to the third head of our instructions, namely, to inquire into the state of the law as regards the subject under consideration, and we shall, on the present occasion, confine ourselves to a brief statement thereof.

The power, interest, and jurisdiction of Your Majesty extend in right of Your Majesty's Crown over all the seas and the shores thereof surrounding Your Majesty's dominions of Great Britain and Ireland; and in the same right Your Majesty has the property of the soil in all rivers which have the flux and reflux of the sea up to high-water mark of ordinary spring tides.

Your Majesty's ancestors have from time immemorial exercised those powers, enjoyed the property and profits, and enforced that jurisdiction.

The Lord High Admiral has, by prescription recognized by statute, the conservancy of the harbours and navigable rivers of Your Majesty's kingdom, and may inquire if any be guilty of any nuisance to such harbours and rivers.

If any nuisances were created in any harbour or navigable river the Lord High Admiral formerly caused the Attorney-General to file *ex officio* informations against the parties. They might also be pursued by indictment. But either remedy was dilatory and expensive. Parliament attempted to find expeditious methods for preventing nuisances, and for removing any that might be erected, and passed the Act of 46 Geo. III., chap. 153, but it has been found wholly ineffectual to accomplish those objects.

Your Majesty's ancestors have by grants and charters given to certain bodies politic and corporate, the conservancies of certain harbours and rivers,

and we find that the soil of the river Thames is claimed by the Corporation of the City of London, and that the soils of many navigable rivers are claimed by the owners of the lands on the banks thereof. Although a subject may by grant have the property of a navigable river, yet Your Majesty hath a right of empire or government over it in reference to the safety of the kingdom, and the people have a public interest of passage and repassage with their goods, and must not be obstructed by nuisances or impeached by exactions, for the *jus privatum* of the owner is charged with and subject to the *jus publicum* belonging to Your Majesty's subjects in the same manner as the soil of a highway, which, though in point of property it may be a man's freehold, is nevertheless charged with a public interest of the people.

The Houses of Parliament, have passed many Acts entrusting the conservancy of harbours and navigable rivers to certain Commissioners with large powers for that purpose.

Thus the jurisdiction of the Admiralty has by charters and Acts of Parliament been superseded, to the great detriment of the public service.

Having thus briefly recited the present state of the law with respect to the conservancy of our harbours and rivers, adduced a few examples of the want of efficient control in all our ports, and shown the necessity of immediate legislative measures in order to stop the daily increasing evils to navigation, we humbly take leave to lay before Your Majesty the recommendations which appear to us best calculated to meet the cases in question.

Your Commission therefore humbly recommend:—

That a Board of Conservancy be established for the superintendence and protection of all the tidal harbours and navigable rivers in the United Kingdom of Great Britain and Ireland; that it be in connexion with the Admiralty; and that it be permanent.

That this Board have jurisdiction by summary proceedings over the waters of the tidal harbours and navigable rivers, notwithstanding any Charters or Acts of Parliament to the contrary, with a reservation of private rights under the Charters, and the continuation of local Commissioners where the Board may think fit.

That the Board should have full powers, by the assistance of engineers, surveyors, and others, to ascertain the extent of all nuisances and obstructions in tidal harbours and navigable rivers.

That the Board should be enabled to have a jury summoned by the sheriff to ascertain whether or not any encroachment or other nuisance in a tidal harbour or navigable river, has existed years; and if it be found to have been made within that time, that the Board have power by their own order, at the expense of the party who made such encroachment or nuisance, to remove it.

That the whole of the coasts of the United Kingdom be divided by this Board into districts, and that each be placed under the superintendence of a competent person, who shall visit each river, port, harbour, and creek at least once a year, or oftener, as it may be necessary, to enquire into and report on the state of each river, port, harbour, and creek in his district, and of all works which may be in progress there.

That the Board should have power to enforce the appointment of a resident engineer or harbour-master, or both, at every port they may consider of sufficent importance to require such constant superintendence.

That every Commission or Trust of a harbour or navigable river, or if there be none, every resident engineer or harbour-master be required to make out and forward to the Board before the 1st of March in each year, a detailed report made up to the 31st December, consisting of an account of all such works as have been executed, with the expenses thereof, within the limits of his superintendence, during the past year; and a report on those works he would recommend to be undertaken during the ensuing year. And, also, to include in that report an account of all changes that may have taken

place during the year in the depth of water, or formation of shoals, or any other change affecting the navigation of the river or harbour.

That if any works, public or private, shall be commenced or proceeded with on grounds within the high-water mark of ordinary spring-tides, without having first obtained the sanction of the Board, or their superintending officer, it shall be lawful, and the Board shall be empowered immediately to stop such works, and to direct the removal of the same by the parties erecting them, and if they refuse so to do, the Board may direct their removal, and charge the parties with the expenses.

That for the protection of the public interests in the navigation of every river, port, harbour, or creek of the United Kingdom, a clause be inserted in every future Act, Charter, or Commission, which affects in any way the tidal harbours and navigable rivers of the country, giving power to, and requiring the Admiralty to appoint one-third part of the whole number of Commissioners to execute the trusts under such Acts, Charters, and Commissions, and also to have the power to change the whole or any of such third part of Commissioners from time to time, as the Admiralty shall think fit, so as to secure at all times a sufficient number at each board or meeting of the Trust, to protect the public interests against any bias or local interests.

That the Lords Commissioners of the Admiralty should direct the surveying officers employed in the seas of the United Kingdom to transmit to them, for the information of the Board of Conservancy, a list of all the parts of the coast on which they have been engaged surveying, and the harbours, ports, creeks, and navigable rivers they have examined, and on which they feel competent to give an opinion, in case of any improvements or alterations being proposed: also, that in future, in every port they visit, they shall make inquiries relative to any embankments or encroachments on the harbour or river, and generally as to any neglect in the preservation of the ports; and forthwith shall report the same to the Secretary of the Admiralty for the information of the said Board.

That, hereafter, the number of Commissioners or Trustees of any harbour or navigable river, docks, or other work affecting navigation, shall not exceed twelve (12), and that four (4) be a quorum, with a view to greater responsibility and the more effectual performance of the duties connected with such Commission or Trust.

That to all existing Harbour Commissions or Trusts the Admiralty shall have power to add new Commissioners or Trustees, not exceeding in number one fourth of the whole Commission.

That the Board should have power to call upon every such Commission, or Trust, or Harbour Master, as the case may be; to make out a correct account of all receipts of money by the said Commission in the course of the year up to the 31st of December; and from what source, and under what authority received; stating, also, the expenditure during the year under separate heads, so as to afford a current account of the resources of each Trust, and of the application of the same; which, after being duly audited, shall be transmitted to the Board of Conservancy on or before the 1st March following.

That the Board should have power to order that a tide scale be placed in all harbours; and in certain ports that a self-registering tide gauge be erected, accompanied by a barometer, and that a record of these be strictly kept; as well as a journal of the winds and weather; of the arrivals and sailings, of cases of wreck, or of any thing affecting the interests of navigation, and transmitted periodically to the Board of Conservancy.

That in all suits and proceedings at law, by the Directors or Commissioners acting under any Commission or Trust of a harbour or navigable river, it shall be imperative on them to take the opinion of, and to act under the directions of the law officers of the Crown.

That a summary of the proceedings of this Board be laid before Parliament on or before the 25th March in each year.

That an annual grant be made by Parliament for the support of the said Board.

Among the last recommendations which we humbly take leave to lay before Your Majesty, there is one which appears to your Commission of essential importance towards the improvement of our harbours, namely, the procuring accurate plans and surveys on a sufficient scale of all the ports and navigable rivers of the United Kingdom; not only for the present value of such plans as showing the actual state of the port, and as affording the basis for improvements; but also to be preserved as documents for reference hereafter, in order to determine at any future time what changes may have taken place.

For farther explanation of various points only briefly touched upon in this Report, we beg to refer to the plans and evidence, and especially to the opinions of the eminent engineers whom we have examined; and also to the various documents. Among the latter will be found the opinion of the Commissioners of the Navy, who having to inquire in 1818 into the state of the river Medway, even at that time strongly urged the necessity of a district superintendence along the whole coast of the United Kingdom similar to that we have now ventured to recommend to Your Majesty.

We beg to state that we are proceeding in our inquiry into the important matters submitted to our consideration, and that we shall hereafter submit a farther Report to Your Majesty.

Your Commission cannot close their Report without expressing, in the strongest terms, their conviction that immediate measures for detailed inquiry and local examination into the state and condition of every port and navigable river of the United Kingdom, are indispensably necessary, with a view to that thorough superintendence, without which many of the evils already recited are liable to recur.

And when they consider the great want of accessible harbours along the whole of the coasts of Your Majesty's dominions,—more especially when the extended use of steam navigation points to such great changes in maritime affairs, whereby every sheltered creek is likely to become of value—and when they consider that by the improvement of our tidal harbours Your Majesty's beneficent intentions for the preservation of the lives and property of a large class of Your Majesty's subjects may be best fulfilled, they earnestly trust that no minor consideration may be allowed to impede the accomplishment of objects of such national importance.

All which we humbly certify to Your Majesty.

TIDAL HARBOUR COMMISSION.—This Commission was issued on the 5th of April this year to Admiral Bowles, Captain Sir James Bremer, R.N., Mr. Hume, M.P., Mr. Chapman, M.P., Mr. Rice, M.P., Mr. T. Baring, M.P., Captain Beaufort, Hydrographer of the Admiralty, Professor Airy, the Astronomer Royal, Captain Washington, R.N., and Mr. Godson, M.P., the Counsel of the Admiralty, giving them full power and authority to enquire into the state and condition of the tidal and other harbours, shores, and navigable rivers of the United Kingdom; and, further, authorising one or more of them to visit and personally inspect the harbours, and obtain every information respecting them.

This Commission must not be confounded with the Refuge Harbour Commission; the latter is confined in its object, whilst the former embraces every harbour into which a vessel can sail for the purposes of trade, and amongst other things, that enquiry includes information respecting places in which vessels may take refuge.

Accordingly, the Commissioners met weekly in London, and on the 8th of July last, made a Report to Her Majesty, which Sir George Cockburn (as we have heard) pronounced to be excellent.

At the last meeting in London it was arranged, under the second part of their Commission, that two Commissioners, of whom one should be Capt. Washington, R.N., the Commander of the *Blazer*, who, with leave from the Admiralty, devotes the whole of his time to the duties of the Commission, should visit some of the harbours during the recess, viz., Mr. Hume should go to Ireland and also visit the harbours on the east coast of England; that Mr. Godson should visit the harbours on the west, the Lune, the Ribble, and the Dee, &c., that Mr. Chapman should go to the harbours on the north-east, the Tyne, and the Weir, the Tees, the Esk, Scarborough, Burlington, and the Humber, that Sir G. Bremer should undertake Exmouth, Fowey, Falmouth, Padstow, and Milford Haven; and that Mr. Rice should attend at Rye, Shoreham, Arundel, &c.

On Friday the 10th October, Mr. Hume and Captain Washington went to Ireland, but Mr. Hume was obliged quickly to return to England.

A public enquiry into the past and present state and the capabilities for future improvement of the river Liffey and the port of Dublin was held at Dublin, which was attended by the Lord Mayor of that city, the members of the Ballast Board, and all the chief persons connected with the shipping interest.

In the course of the enquiry it appeared in evidence that six feet depth of water had been gained in the channel of the river and over the bar during the last twenty years, that £8000, had been annually expended in improvements and that the present revenue of the port is upwards of £33,000 a year.

Since the late meeting at Wexford, Captain Washington has visited Waterford, Cork, Limerick, and Galway, at each of which places he held a public enquiry. He also inspected Kinsale, Youghal, Crookhaven, the spacious harbours of Berehaven, in Bantry Bay, and Valentia in Kerry. The Connemara, Roundstone and Clifden bays were visited, as also Westport, Sligo, Ballyshannon, and Donegal, in the north-west of Ireland. Public meetings of enquiry were held in the more important places on the north and east coasts, as at Londonderry, Belfast, Newry, Dundalk, and Drogheda, besides which the Commissioners visited and inspected the Artificial harbours of Kingstown, Howth, Donaghadee, Dunmore, and Port Rush, the capacious natural harbours, Lough's Swilly, Foyle, Strangford, Carlingford, and Larne, as well as Ardylap, Killough, Newcastle, Skerries, Arklow, Wicklow, and almost all the fishing piers around the coast.

It is gratifying to know that the Revenue and tonnage of every port are on the increase, and that the harbour income of Ireland, arising from tolls paid by shipping exclusive of light dues, exceeds £100,000 a year.

Captain Washington has arrived at Lancaster, to commence the enquiry into the English harbours with Mr. Godson.

Potato Disease.—We have occasionally spoken in commendation of *Edwards' Patent Preserved Potato*, for its wholesome and imperishable nature, combined with economy, and being purely vegetable, and as an article peculiarly adapted to meet the evil of the deprivation of vegetable food, so much felt by sea-going people. We again notice the Patentees' invention, in which all that is estimable in the potato is secured against decay. From the present lamentable failure and diseased state of this season's growth of potatoes, a general apprehension of incipient disease exists, even in those that appear sound, and which will render any shipment of this year's potatoes not only a hazardous, but may be a dangerous experiment, as decaying vegetable matter is a prolific source of fever and diseases of the most fatal character.

In corroboration of our favourable opinion, we would call the attention of our readers to the Patentees' Prospectus in the *Nautical Magazine*, containing Professors and Medical Certificates, Government Reports, &c.

GALLANT CAPTURE OF A PIRATE SLAVER ON THE WEST COAST OF AFRICA.—Dispatches have been received by the Government, officially confirming the subjoined account of the gallant capture of a pirate slaver, by the boats of H. M. sloop, *Pantaloon*, Capt. Wilson. The *Pantaloon* had two men killed, and seven wounded. The pirate had seven men killed, and seven wounded.

The boats engaged in the affair belonged to the *Pantaloon*, 10, sloop, Com. E. Wilson. The prize is a remarkably fine vessel of about 450 tons, polacca rigged, with immense sails. She is of great celebrity on the coast, is armed with four 12-pounders, and had a mixed crew, composed chiefly of Spaniards, amounting to about fifty; and was equipped for any villainous service, whether slave-dealing or piracy.

The *Pantaloon* had been baffled in her chase of this vessel, supposed to be a slaver, for two or three days; and it appears, from what our correspondent has stated, the pirate, after leading the *Pantaloon* away to St. Thomas's, and out-sailing her, doubled on the cruiser, and then ran to Lagos; but Capt. Wilson was too old an officer on the coast to be so taken in, and on the morning of the 26th of May the sloop and the stranger caught sight of each other about two miles distant, off Lagos, becalmed. The pirate hoisted no colours, and the Captain of the *Pantaloon*, desirous of renewing his attentions, sent the cutter and two whale boats under the command of the First Lieutenant, Mr. Lewis de T. Prevost, with the Master, Mr. J. T. Crout, and the boatswain, Mr. Pasco, with marines and seamen, amounting to about thirty altogether, to make a more intimate acquaintance with the stranger, taking especial care to be fully prepared for a warm reception. The pirate gave the boats an indication of what they were to expect, as they neared, by opening on them a heavy fire of round shot, grape, and canister, in such a spirited style that, after returning the compliment by a volley of musketry, the boats prepared for hard work. Animated by the show of resistance, each boat now emulated the other in reaching the enemy, the pirate continuing a sharp fire as they steadily advanced, the marines as briskly using their muskets. In half an hour from the discharge of the first gun from the pirate, the boats of the *Pantaloon* were alongside; Lieut. Prevost and Mr. Pasco on the starboard, and Mr. Crout, in the cutter, on the port side. The pirate crew, sheltering themselves as much as possible, nevertheless continued to fire the guns, loading them with all sorts of missiles—bullets, nails, &c., and amidst a shower of these, our brave sailors and marines dashed on board. Lieut. Prevost and his party in the two boats, notwithstanding their hot reception, were soon on the deck of the prize. The Master boarded on the port bow, and despite the formidable resistance and danger, followed by one of his boat's crew, actually attempted to enter the port as they were firing the gun from it. He succeeded in getting through, but his seconder was knocked overboard by the discharge; the gallant fellow, however, nothing daunted, was in an instant up the side again, taking part with the Master, who was engaged in a single encounter with one or two of the rascals. Having gained the deck after a most determined resistance, they now encountered the pirates hand to hand, when the cutlass and bayonet did the remainder of the work. Lieut. Prevost finally succeeded in capturing the vessel, but the pirates fought desperately, and it was not until seven of their number lay dead on the deck, and seven or eight more were severely wounded, that they ran below or yielded.

It may naturally be supposed that in such a hard and close struggle the gallant boats' crew did not escape unscathed. We are sorry to say that a fine able seaman, named Henry Jackson, was killed, and a private Royal Marine was so severely wounded that he died a very short time after. The Master was severely wounded; Pasco, the boatswain, was slightly wounded, as were also four others,—Carrick, the Captain's coxswain, Soughton, a quartermaster, Harmer, an able seaman, and a marine, named Freemantle.

The affair has excited a great sensation on the coast, and the men-of-war are loud in their congratulations on the success of the *Pantaloon*. The general feeling among the squadron is admiration of the gallantry displayed, coupled, however, with ardent wishes for such an opportunity for distinction.

Wrecks of British Shipping.

Continued from p. 327.—cs. crew saved; cd. crew drowned.

VESSELS' NAMES.		BELONG TO.	MASTERS.	FROM.	TO	WRECKED.	WHEN.
Betsey	211	Sunderland	Bruce	Ghuckstadt	Sunderland	Blaavand	Aug. 23, cs
Brothers		S. Shields	Bell	———	———	Pakefield R.	Sept. 15, cs
Cherub		Sunderland	Gray	Sunderland	London	off Corton	Sept. 17, cs
Coringa Packet		———	Chilcott	Sydney	India	N. C. Austra	May 8, cs
Dependant	215	Bridgwater	Merchant	Bridgwater	Quebec	At sea	Sept. 14,
Dumfrieshire		———	Davis	———	———	Anticosti	Sept. 5, cs
Elizabeth		S. Shields	Usher	foundered	60° East of	Hartlepool	Aug. 21, ls
Fives		S. Shields	Pierce	Newcastle	Hamburgh	Horn Reef	Aug. 23, 5d
Glenview		Belfast	passed	abandoned	timber laden	in long 17°W	Sept. 25.
Gov. Doyle	220	Grenada	———	Montserrat	Barbados	Buceo Reef	Aug. 4,
Graham		Perth	Kathrine's	Teignmouth	Leith	foundered	Sept. 12, cs
Hebe		———	Dowland	Liverpool	Black Sea	C. of Asia	Sept.
Hope		London	passed	abandoned	in	43°N.29½° W	Aug. 15,
Hyderabad		———	Robertson	Sydney	India	N. C. Austra	May 25, cs
Indemnity	225	———	Graves	P. Rush	Quebec	Magdalen I.	Aug. 7, 1d
Industry		———	Coswell	Montreal	Halifax	Kamouraska	Aug.
James Henry		———	Tobin	Mirmichi	———	Thrum Cape	Aug. 13, cs
Jean		Sligo	Mc Fie	Stockholm	———	Anholt	Aug. 21, cs
James Watt	230	Montrose	Donald	———	———	Narva Bay	Sept. 22, cs
Liverpool		———	Jaques	Liverpool	Petersburgh	Nickmans G	Aug. 21,
Margaret		Port William	Johnson	———	———	Lossiemouth	Aug. 22, cs
Nathaniel Tovee		———	Tovee	———	abandoned	off Flambro'	Aug. 21, cs
Neptune		Liverpool	Braithwat	Bombay	China'	Madagascar	cs
Oak	235	Aberdeen	Benzie	———	Stettin	Lybeser	Aug. 25, cs
Osprey		———	———	Cork	Quebec	Anticosti	Aug. 28,
Packet		Yarmouth	———	S. Domingo	Yarmouth	———	Aug. 22,
Phœnix		———	Boy	Aberdovey	Hamburg	Henneguard	Aug. 23, cs
Samuel & Sarah		S. Shields	Scotland	———	———	Brown Bank	Aug. 23, cs
Sapphire	290	N. Shields	———	———	Quebec	———	
Shamroc steamer		Liverpool	Mackay	Liverpool	St. Johns Nd	At Sea*	Sept. 15, cs
Sovereign		———	Roope	———	foundered:	off Lemon S.	Aug. 20,
Tallyho		———	Richards	run foul of a	French ship	& abandoned	Sept. 2, cs
Tarbolton		Irvine	———	Liverpool	Dalhousie	Brian I.'	July 24, cs
Wreath	295	———	Bremer	Archangel	Glasgow	C. Norway	July 29, cs

215—Abandoned. Master and crew picked up in their long boat by brig John White, Meddrel, from Miramichi, were hospitably treated and landed at Deal.

217—In the gale of the 21st of August the Dutch fishing smack Friendship, Mauldyke, seeing the Elizabeth in a sinking state, her boats stove, and the smack without any, bore down, and threw a rope to the crew by which one man only William Anderson who was dragged on board the smack was saved, the Elizabeth at the same moment went down with the crew on board.

234—Crew saved (date not stated) by Dutch man of war schooner Cameleon.

291—* In lat. 50° 51′, long. 10° 50′ crew taken off by the Jane Brydges of Sunderland. Crew of Shamroc speak in highest terms of Mr. Brydges, master of Jane, who when he first descried them *nine* miles off and observed it was a steamer going in the same direction and making no progress, bore away for them, and after getting the crew on board administered to their exhausted condition in every way that humanity could suggest.

Examination of the Officers of the Royal Mail Steam Packet Company.

(Continued from p. 499.)

24.—On 12th August, 1846, at 5h. 27m. A.M., in lat. 28° 0′ N., long. 30° 0′ W., the sun's rising amplitude was E. 1° N., required the variation.

25.—On 6th May, 1846, 10h. P.M., in lat. 42° N., long. 10° 30′ W., observed the Pole Star to bear by compass N. 29° 30′ E., required the local attraction of the compass (ship's head east).

26.—On 3rd June, 1846, at 10h. 30m. P.M., observed Ushant light dipping in the horizon from a position aloft 30 feet above the level of the sea; required the distance from the light.

27.—On 2nd June, 1846, observed the angle of elevation above the sea of the lantern of the Needles lighthouse to be 0° 36′; required the distance.

28.—Required the time of high water at Demerara, A.M. and P.M., on 5th June, 1846.

29.—Required the length of a knot on a log line to correspond with a glass running thirty-two seconds.

30.—Required the distance on the arc of a great circle between St. David's Head in Bermuda and St. Agnes lighthouse (Scilly), also the courses and distances for every five degrees difference of longitude on the arc, with the successive latitudes arrived at, and the difference between this method and that by Mercator Sailing.

31.—Required the position and description according to the best authorities, of all the lights on both sides of the British Channel and West Indies, also the latitude and longitude of all places near to which the vessel will pass, and of the dangers on each side of her track, with the courses and distances, and set and drift of the currents.

32.—Required the bearing and distance from point to point in the British Channel from Scilly to the Downs, with the soundings, and set, drift, and duration of the tide, according to the best authorities.

33.—Required the rule of the road in steamers and sailing vessels, and how to act in the event of meeting vessels or danger suddenly, also how to lay a steamer to in a gale of wind, and how to act in the event of springing a leak, or, the coals taking fire by spontaneous combustion, and the method of finding the correction or difference of local attraction between the binnacle and azimuth compass, also the various adjustments of a quadrant and sextant.

(To be continued.)

IRON LIGHTHOUSES.—The following particulars of the Cost of Iron Lighthouses may interest our readers.

Particulars.	Jamaica Lighthouse.	Bermuda Lighthouse.
Diameter at base	18½ feet	24 feet
„ at top where under gallery	11 „	14 „
Height of the above	86½ „	105 „ 9 in.
„ cast iron lightroom on the top	5 „	7 „
„ glass	5 „	10 „
„ roofing and cowl about	5 „	9 „
Lightning rod still higher		
Price of tower, lanterns, and all fitted up in London	£3,500	about £5,500
Character of light	reflectors.	refractors.

These Lighthouses were constructed of iron by Mr. James Gordon, Civil Engineer; the latter is not yet lighted, but the former, which stands on Morant Point, is highly spoken of by all who have seen it.

Monthly Record of Naval Movements.

Apollo, 3rd Oct. left Cork for the Cape with troops; *Ardent* st. v., Oct 12, arr. at Devonport from Ascension; *Alarm*, 26, commissioned at Devonport, 14th Oct., by Capt. C. C. Frankland; *Acorn*, 16, Com. Bingham, 14th July at Buenos Ayres.

Cruizer, 16, Com. Fanshawe, 3rd July arr. at Singapore, 15th sailed; *Calliope*, 26, Capt. Stanley, 26th Aug. arr. at Madeira, 29th sailed for Cape; *Conway*, 26, Capt. Kelly, 17th July arr. at Mauritius from Bourbon; *Comus*, 18, left Buenos Ayres on 6th July for Monte Video; *Collingwood*, 80, Capt. Smart, 15th July left Callao.

Daring, 12, Com. Matson, 22nd Sept. arr. at Devonport. *Eclair*, st. v., 28th Sept. arr. at Mother Bank in quarantine, Com. Estcourt having died of fever on 16th Sept., sailed for the eastward, 2nd Oct. arr. at Sheerness and placed in Stangate Creek in quarantine; *Eurydice*, Capt. Elliott, 1st Sept. at Vera Cruz.

Fox, 42, Commodore Sir H. M. Blackwood, 14th July arr. at Madras; *Fly*, Capt. Blackwood, 1st July arr. at Singapore from Port Essington: *Formidable*, with flag of Vice Admiral Sir E. Owen, arr. at Spithead 29th Sept. *Firebrand*, arr. at Buenos Ayres 12th July from Monte Video.

Gorgon st. v., 24th July at Buenos Ayres; *Grecian*, 16, at Rio 16th July; 6th Oct. *Growler* st. v., Com. Buckle, arr. at Woolwich. *Helena*, 16, Com. Sir. C. Rickets; *Heroine*, 6, Com. Edmunds, 11th Oct. left Plymouth for Coast of Africa; *Herald* surv. v., Capt. Kellett, C.B., 19th August arr. at Rio.

Iris, Capt. Mundy, 17th June arr. at Hong Kong from Amoa and Chusan. *Juno*, 26, commissioned at Sheerness by Capt. P. Blake.

Mutine, 12, Com. Crawford, 17th Aug. arr. at Table Bay; *Modeste*, 18, Com. Baillie, 16th July left Callao in company with *Collingwood*. *Osprey*, 12, at Malacca 1st July on way to New Zealand.

Pilot, 16, Com. Lewis, 20th July arr. at Singapore from Malacca; *Persian* Capt. H. Coryton, Sept. 1, at Vera Cruz; *Pandora* sur. v., Lieut. Com. Wood, 19th Aug. arr. at Rio; *Philomel*, 6, sur. v., Com. Sullivan, left Buenos Ayres, 16th July, for Monte Video.

Racehorse, 28, Com. Hay, June 30 arr. at the Cape from Plymouth; *Racer* 16, 19th July arr. at Buenos Ayres; *Royalist*, 10, arr. at Singapore 15th July. *Scylla*, 16, Com. R. Sharpe, 21st Sept. arr. at Devonport from West Indies, 2nd Oct. paid off; *Snake*, 16, Com. Hon. W. B. Devereux, 20th Sept. arr. at Sheerness, 25th paid off; *Serpent*, 25th July arr. at Madras; *Superb*, Capt. Corry, arr. at Portsmouth 28th Sept. from Plymouth.

Thunderbolt, Com. Broke, 28th June arr. at the Cape from Mauritius, 29th Aug. left Cape for Natal.

Vindictive, 50, Capt. Seymour, with flag of Vice Admiral Austen, 1st Sept. arr. at Halifax, remained 16th; *Vulture*, Capt. McDougal, 23rd July arr. at Rio from Devonport, 30th July at Rio, 17th Aug. arr. at St. Helena.

Portsmouth.—In Harbour—*Victory*, *Excellent*, *President*, *Apollo*, *Kingfisher*, *Victoria and Albert* Royal Yacht, *Fairy* tender, *Sylvia* tender, *Nautilus*, and *Dasher*, *Comet*, *Rattler*, *Confiance*, and *Echo* steam vessels. In Dock—*Prince Regent*, *Trincomalee*, *Amphitrite*, *Vanguard*, *Rifleman*, and *Leander*.

Plymouth.—In Harbour—*Caledonia*. In the Sound—*St. Vincent*, *Trafalgar*, *Queen*, *Rodney*, *Albion*, *Canopus*, *Superb*, and *Daring*.

Sheerness.—In Harbour—*Formidable*, *Raven*, *Dwarf*, and *African* steamers. In Basin—*Juno*, *Alarm*, *Havannah*, *Brilliant*, *Bittern*, and *Samson* steam vessel. In Dock—*Ocean*, *Blenheim*, and *Dido*.

Chatham.—In Harbour—*Poictiers*, *Calypso*, *Janus*, *Retribution*, *Cumberland*, and *Mæander*. In Dock—*Raleigh*, *Fortitude*, and *Cockatrice*.

Promotions and Appointments.

(From the Naval and Military Gazette.)

Promotions.

Commanders—R. S. Hewlett—on the retired list of 1816, J. Poate.

Lieutenant—A. Phillimore.

Surgeon—S. Bernard.

Paymaster and Purser—G. Herbert

Appointments.

Admiral—Sir C. Ogle, Bart., to be Commander in Chief at Portsmouth.

Rear Admiral—Sir S. Pym, K.C.B., to command Experimental Squadron.

Captains—S. Lushington (1829) to *Retribution*—C. C. Frankland (1841) to *Alarm*—Sir R. Grant (1828) to be flag captain to Admi. Sir C. Ogle, Bart—H. T. Austin, C.B., to *William and Mary*, yacht, for temporary service in the steam department at Woolwich.

Commanders—H. J. Douglas (1845) to study Naval College—G. K. Wilson *Pilot*—H. Bagot (1848) to *Excellent*.

Lieutenants—C. H. Beddoes (1832) to *Albion*—W. H. Moore (1815) to *Caledonia*—R. Fenner (1840) *St. Vincent*—G. R. Wolrige (1842) to *Excellent*—H. King (1844) to *Kingfisher*—A. Phillimore to *Hibernia*—S. Pritchard (1843) to *Penelope*—J. W Dorville to *Juno*—C. Hawkey to *Avon*—A. McNaghten to *Alarm*—W. Moorsom to *Rodney*.

Masters—W T. Wheeler to *Alarm*—J. Aylen to *Alban*—W. T. Mainprise to study steam machinery at Woolwich—W. R. Madge to *Canopus*—Mills to *Caledonia*.

Mates—H. D. Selby, R. H. Hallowes, and A. W. A. Hood to *Excellent*—J. B. Field to *Kingfisher*—H. Nelson to *Heroine*.

Masters Assistant—A. C. Webb to *Victory*

Second Masters—T. Thomas to *Amazon*—H. Pennington to *Avon*—N. Roberts to *Porcupine*—W. Johnson to *Alarm*—J. Pyper to *Juno*—H. Clements to *Alban*.

Midshipmen—H. M. Elliott to *Juno*—E. Nares to *Canopus*—N. F. Spencer to *Mutine*—B. B. Webb to *Victory*.

Naval Cadets—G. T. Gordon to *Kingfisher*—C. J. Lindsey to *Superb*—C. Mitchell, Hon C. J. Keith, and Hon. H. W Chetwynd.

Assistant Surgeon—Loney to *Pantaloon*.

Paymasters and Pursers—J. Bluett to *Kingfisher*—H. Haig to be Secretary to Sir C. Ogle, Bart., J. Grant to be Secretary to Sir S. Pym—W. P. Carrigan to *Alarm*—G. Herbert to *Conway*.

Chaplains—Rev. J. U. Campbell to Bermuda—Rev. F. C. Halsted to *Juno*.

Clerks—J. E. Drice and J. Kirkman to Sir C. Ogle—H. Smith to *William* and *Mary*.

Coast Guard.

Appointments—Lieut. C. Wise, to command *R.C.*, Lieut. C. S. Haswell to Cadwith, Lieut. Ferrar to Branscombe, Lieut. C. A. Lafargue to Littlestone.

Births Marriages and Deaths.

Births.

At the Royal Naval Asylum, Greenwich, Sept. 20th, the wife of R. Whitmore Clarke, Esq., R.N., of a daughter.

At Southsea, on the 31st ult., the wife of H. S. Gibson, Esq, of H.M. brig *Lily*, of a daughter.

At Southsea, Sept. 12th, the widow of the late Capt. C. Paget, R.N, of a posthumous son.

At Winckton, Sept. 6th, the lady of Com. R. Harris, of H.M. sloop *Flying Fish*, of a son.

At Broadstairs, Oct. 6th, the wife of Capt. Peake, R.N., of a son.

Marriages.

Oct. 7th, at Eling, Hants, Capt. J. R. Ward, R.N., to Anna Maria, daughter of the late H. Selleck, Esq., Millbrook, Southampton.

Sept. 25th, at Essendon, Herts, Capt. T. M C. Symonds, R.N., to Anna Maria, daughter of the late Captain E. Heywood, R.N.

Oct. 8th, at Portsea, Lieut. C. H. Lapidge, R.N., to Eliza Caroline, daughter of H. Carter, Esq., M.D.

Deaths.

At Brighton, on the 10th inst., Adm. Sir Charles Rowley, Bart. G.C.B. aged 75.

June 25th, at Simon's Bay, Cape of Good Hope, aged 20, Alan, only son of Rear-Adm. the Hon. J. Percy, C.B.

Sept. 1st., at Woolwich, Frances Caroline, daughter of Com. J. Fisher, R.N., aged 21.

Sept. 26th, aged 75, Capt. J. Norton, R.N., of Beauvoir-town, Kingsland.

NAVAL OBITUARY.—The deaths of the following officers have been officially reported to the Admiralty since the 20th of June:—*Flag Officers*, Vice Admiral George J. Shirley, and Rear Admiral James H. Tait. *Captains*, Robert Maunsell, C.B., Edmund Waller, and Sir William S. Wiseman, bart. *Commanders*, Charles Haultain, Wm. Minchin, Adam C. Duncan, Edward C. Earle, John Lodwick; Retired, Robert Palk, Robert Fricker, Samuel Cuming, W. S. Oliver, Charles Tilley, and Samuel Mottley. *Lieutenants*, John K. Tudor, Charles J. Cater, Richard Darke, Joseph Lowe, James Newton, Stephen R. Walsh, Charles Dangerfield, William Pinhorn, Christopher Smith, Robert Inman, Isaac Avarne, Robert Browne, Sydenham Wylde, Daniel Woodruffe, Frederick Hennah, William W. Wilson, Sir Francis Freeling, bart., R. G. Campbell. *Masters*, R. Tyrrell, John Pearn, William White (a), Walter Ramsay, Thomas Baseley, Edward M. Chaffers. *Second Master*, Thomas Walker. *Medical Officers*, Surgeons J. H. Swann, Geo. Walker, James Farrell, Patrick Brenan; Assistant Surgeon Thomas F. Wolrige (acting). *Paymasters* and *Pursers*, W. Tuckfield, John Sullivan, Jesse Sloggett, Silas E. Stretton, James Gregory. *Royal Marines*, Major Richard Parry, Captain Samuel Mallock. Second Lieutenants, Edward Mallard, and William Colley.

METEOROLOGICAL REGISTER.

Kept at Croom's Hill, Greenwich, by Mr. W. Rogerson, of the Royal Observatory.

From the 21st of September, to the 20th of October, 1845.

Month Day.	Week Day.	Barometer.		Fahrenheit Thermometer, In the Shade.				Wind.				Weather.	
								Quarter.		Strength			
		9 A.M.	3 P.M.	9AM	3PM.	Min	Max	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.
		In Dec.	In Dec.	o	o	o	o						
21	Su.	29·60	29·46	59	59	53	61	S	S	4	5	bcp 1)	qbcp (3 (4)
22	M.	29·71	29·85	51	58	47	60	SW	SW	4	4	bc	bc
23	Tu.	30·04	30·16	48	52	43	53	N	NE	8	10	bcm	qo
24	W.	30·24	30·20	41	53	33	55	N	E	2	2	b	bc
25	Th.	29·85	29·75	52	58	38	60	S	S	4	2	o	o
26	F.	29·74	29·84	50	58	44	58	W	NW	1	3	bm	bc
27	S.	29·94	29·82	56	58	43	59	SW	SW	6	5	qod (2)	qo
28	Su.	29·86	29·88	53	59	48	60	SW	SW	4	2	bc	bc
29	M.	29·94	29·90	48	56	42	58	SW	SW	2	3	bcm	or (4)
30	Tu.	29·73	29·75	52	57	48	58	SW	SW	2	4	o	bc
1	W.	29·96	29·96	51	57	43	58	SW	SW	2	1	bcm	bcm
2	Th.	29·76	29·74	60	62	47	65	SW	SW	5	4	qor (2	o
3	F.	29·64	29.54	60	66	58	67	S	S	2	4	or 2) 2)	bc
4	S.	29·58	29.58	56	58	50	61	SW	SW	4	6	bc	qbcp (3 4)
5	Su.	29·90	29·96	49	55	48	56	NW	NW	3	2	bc	bcm
6	M.	29.88	29·68	43	49	34	50	E	E	4	4	bcf	or (3) (4)
7	Tu.	29·45	29·49	47	53	46	54	SW	SW	2	3	o	bc
8	W.	29·42	29·36	47	55	41	57	S	S	1	3	op (2)	bc
9	Th.	29·33	29·31	49	50	41	51	S	S	2	2	or (2	bcp (3)
10	F.	29·47	29·49	45	51	40	43	S	S	3	2	bcp (1) (2)	bcp 3)
11	S.	29·43	29·57	50	53	45	54	SE	NW	1	2	op (2)	bcm
12	Su.	30·03	30·07	44	53	39	54	W	W	2	1	bcm	bcm
13	M.	30·26	30·34	53	59	41	60	S	S	2	2	bc	b
14	T.	30·48	30·46	50	58	43	60	S	S	2	3	b	b
15	W	30·23	30·15	51	61	44	62	S	S	3	4	bc	bc
16	Th.	30·08	30·16	53	56	52	58	NW	NW	4	4	bcm	bcm
17	F.	30·10	30·04	50	53	42	54	SW	SW	5	5	qo	qo
18	S.	30·14	30 14	57	58	53	59	W	W	4	4	o	bc
19	Su.	30·24	30·20	54	57	49	58	SW	SW	4	4	bc	bc
20	M.	29·95	29·77	52	54	50	58	SW	W	2	2	o	bc

SEPTEMBER 1845.—Mean height of the Barometer—29·924 inches; Mean temperature = 54·4 degrees; depth of rain fallen 2·15 inches.

TO OUR FRIENDS AND CORRESPONDENTS.

The subject of EXPERIMENTAL SAILING has excluded several papers from our present number, which will appear in our next.

The paper from William Street has reached us, and also the letter of our esteemed correspondent S. J.

THE AFRICAN GUANO TRADE.

Being an account of the trade in Guano from Ichabo, and other places on the African Coast, more particularly, the Proceedings of the Committee of Management.

By an Ex-Member of the Committee.

The Ichabo Arms, not found in the Herald Office or any Peerage.

Creation 1845.

Arms. *Az.* At the *nombril* point, a man demi-vested wheeling a barrow, ppr. with bags, *manifest* Or. Guano *obscure*, on plank to *sinister* Gu. Sur tout, the sea *wavy, vert.* Ship rolling ppr. towards *dexter.*

Crest. Two arms *embowed* ppr., springing from flower basket Gu., *dexter* grasping a pickaxe, Az., *sinister*, a spade horizontal ppr. of the third.

Supporters. On either side a Penguin ppr. winged and beaked Or., *dexter regardant, sinister dormant, statant* on bags——*empty!*

Mottoes. On a ship's side floating at base, "*Sic vos non vobis* guano *ficatis aves.*"

Above all, on flying scroll—"Who stole the Donkey."

The above Coat of Arms, resting on bags of Guano is one considered suitable to the Committee; its fidelity to existing circumstances at Ichabo, will be apparent to any one who was ever there. The upper motto "Who stole the Donkey?" was the common question of the labourers or seamen, respecting any stranger on landing, or on the passing of some master, who had rendered himself obnoxious to them, by some imprudent conduct, another party of course answering the question, by saying, "the man with the white hat," or whatever other article of his dress was most conspicuous.

Preface.

IT is supposed that little apology will be required for introducing to the notice of the British Public, an authentic account of the African Guano Trade; particularly as to the manner in which it was conducted on the coast. The proceedings of the Committee for management have from the first, been very much misrepresented, and all the various stories published in the Newspapers from statements either written, or conveyed to Great Britain by shipmasters, are more or less incorrect. The idea entertained by the generality of merchants, and shipowners interested in the guano trade, of the conduct of business at Ichabo must be erroneous, from the garbled prejudiced party statements they received; and as a great amount of valuable property was at one time engaged in the trade, the Author is of opinion, that, a correct account of the Committee's proceedings will be acceptable. With regard to the Author's means of giving this statement, his situation as a member of that Committee during its existence, with a perfect cognizance of all its proceedings and documents connected with it, may be deemed sufficient; while for the correctness of the statement, and its impartiality, he may refer the reader to the Committee Records and Documents, now placed in the keeping of the Secretary to the Association of Underwriters at Lloyd's for Public reference.

The subject of the sketch which accompanies this Memoir, has been briefly but justly described by Capt. Sir John Marshall. He says—

"Imagine a fleet of about 225 sail, some of them old and vamped up for the occasion, with many of the masters of irregular habits, and insubordinate crews, crowded together, in certainly, the most boisterous anchorage imaginable; the crews and labourers (amounting to about 3500 men) of the lowest and most dissipated description. It is, in one respect a proud sight, to witness so many craft, all lying with their anchors ahead, amidst dangers of no ordinary nature; evincing the daring and superior seamanship of our people, in coolly riding under difficulties that would appal most others. No wrecks have occurred since I have been here, but whilst we have saved one vessel when on the rocks, much mischief has occurred. Bowsprits, stern-frames, and boats have principally suffered, although I believe the damage is trifling under such circumstances. Imagine so many ships crowded together, at an average distance from each other, of from 25 to 30 fathoms, amidst rollers in which the *Isis* has dipped her main deck guns, the lower cills of her ports being nine feet and more above water; where there is but little protection from a gale at west, which happily hardly ever occurs; and where, with other winds, there is but partial shelter;—Such is Ichabo anchorage."

THE AFRICAN GUANO TRADE.

Part I.

Guano, or Huano, as it is also spelled in Spanish, (either letter being used at the discretion of the writer) is, it is believed, a Spanish word: it is however a matter of no importance whether it is Spanish or Peruvian, the word is now a good English one, from adoption. Guano as a manure, has been known and used in Peru from the date of the earliest records in that country; and it may be presumed, long prior to any written history, it was esteemed so valuable, that an old law in Peru, made its removal from the coast without authority, punishable by death. Having been known and esteemed then, for such a length of time, it may well be deemed singular, that it never became known in Europe until a recent date. The well known exclusiveness of the Spanish Government however while that power held its sway in South America, and the continued state of anarchy in which that country has since been kept, by its numberless revolutions, may afford a solution to the difficulty. The credit of its first introduction to England, is certainly due to a French Gentleman named Barhoillet, and Mr. Bland partner in the firm of Myers, Bland, & Co. of Valparaiso. These gentlemen sent to England several cargoes in 1839 and 1840, but had at first great difficulty, in introducing it to the notice of the Agriculturists. It however soon made its value apparent, when these gentlemen, in connection with another English mercantile house, obtained the exclusive privilege of shipping it from the coasts of Peru and Bolivia for a term of years, and they are now reaping the reward of their spirited perseverance.

The credit of first informing British merchants and shipowners, of the existence of guano on the south-west coast of Africa is decidedly due to Mr. Andrew Livingston of Liverpool, a gentleman well known to the Nautical world, who gained his knowledge of the existence of Ichabo, from perusing the work of an American sealer named Morrell, who published an account of his various Sealing voyages. Morrell's work is now well known in England, many copies of it having been sent from the United States, and extracts relating to the African coast, published in the *Nautical Magazine*, as well as in a detached form by Lieut. Petrie. Generally, Morrell's account of the African coast is pretty correct, although in a great many individual instances it is decidedly wrong. It is written in a most enthusiastic style, and in many instances highly over coloured; neither could his observations have been written at the time he was on the coast, but evidently appear to have been compiled after-

wards, from memory, and the assistance of the vessel's Log book. These remarks are not made, with any view of detracting from Morrell's character, as an enterprising Navigator, and as the person who undoubtedly made known the existence of Ichabo, but merely to account for many mis-statements which are found in his work respecting the African coast. From several persons who have sailed with him, as well as his general character in the United States, it is well known, that many of his reputed journies into the interior of Africa are mere fabrications.

Mr. Livingston endeavoured in vain, to get a well-known firm in Liverpool to send out vessels to Ichabo, so sceptical were many at first about its existence. After some considerable time elapsing from his first proposing the matter to the house in question, two other parties were induced to send out a small schooner of their own, and to charter two other small vessels. These vessels sailed with sealed orders; one it is believed returned without seeking for Ichabo; the schooner arrived at Angra Pequeña and came to an anchor in the outer roads, from which she was driven to sea with a strong S.S.W. wind, evidently from the parties on board not being sufficiently acquainted with the anchorage, although an excellent Admiralty Chart of it exists. She drove to leeward so far that on standing in to the land, she only fetched into a bay about 12 miles to the northward of Ichabo, since called Hottentot Bay. From this bay the master of the schooner pulled up to Ichabo in a small jolly boat, succeeded in landing (at least so says the schooner's Log-book,) but nearly knocked the boat to pieces in the surf. The boat returned to the schooner, when it was discovered there was only thirty gallons of water on board and none to be obtained on the coast; under these circumstances she bore up for St. Helena, when instead of returning to the coast she was freighted to the West Indies.

One of the chartered brigs, the Ann of Bristol, Captain Farr, on his passage out called at the Cape of Good Hope, and filled up his water, after which he reached Ichabo, being there in March and April 1843. Having no materials on board with which to construct a stage, and never apparently thinking of any other method of loading, the brig's loading proceeded slowly, and with difficulty, by watching fine days to enable the boats to approach the rocks to receive the bags of guano. After being about three-fourths loaded, the brig began to drive, in one of the strong southerly winds which prevail on the coast, and having parted his chains, Captain Farr bore up for England, where he arrived in safety, being sent to Dumfries to discharge, with a view to secrecy. The news however soon spread, and although every possible means were resorted to by the charterers to mystify the affair, and prevent others knowing, it was found impossible. Captain Farr made an arrangement with a house in Glasgow, his crew communicated what they knew to others, and Mr. Livingston told the information to a Liverpool firm, considering himself perfectly at liberty to do so, from the unjust manner in which he was treated by the owners of the Gallovidia, who refused to abide by the agreement, (unfortunately a verbal one,) which they made with him, and never it is believed to this day, gave him the slightest remuneration for his valuable information. Their future speculations on the coast, however, have been conducted in such a manner, that it is understood they have met their reward.

About the middle of November 1843, several vessels arrived (principally from Liverpool and Glasgow) simultaneously on the coast, one going direct to Ichabo by accident, others going to Possession Island, and Angra Pequeña, where it was believed guano also existed. Few of the parties first arriving out on the coast, were aware of the existence of Ichabo, merely knowing those islands mentioned in the Chart and Books of Directions. They soon however found it out, and many after loading their vessels at Possession Island and Angra Pequeña, on seeing the superior quality of the Ichabo guano, threw all the former overboard, and again loaded with the latter. None of the vessels first arriving at Ichabo, were provided with sufficient materials to erect the stages necessary to carry on the loading of the vessels with facility; the islands being constantly surrounded by a heavy surf, breaking some distance from the shores, and consequently requiring stages of a considerable length. The rich treasure however, lay before them, and energy and emulation soon attempted to overcome the natural difficulties. Some parties joined together their spare spars, studding-sail booms, top-gallant-masts and mizen-top-masts, and by erecting a stage commenced operations in a united manner; while others more destitute of means, or more enterprising, erected a sort of flying railway, with fewer materials, but an equal, if not greater amount of labour. As vessels arrived from England, after the difficulties of loading were known there, abundance of spars, and planks for staging arrived, and towards the latter part of 1843 these articles were completely at a discount.

The difficulties met with in erecting the stages were very great, the surf being high, the water rather deep, the bottom entirely composed of rocks covered with sea-weed, affording no means of fixing the spars, and the distance required from the shore being from two to three hundred feet. The stages could seldom or never be erected in a straight line, from the irregularities of the rocky bottom, and difficulty of finding a smooth place for the boat to lay at the end of the stage. All the stages first erected, except one, were soon washed down, from the insufficiency of their construction, and the seas which at times rolled in heavily. The first process in erecting a stage after choosing the position (which could only be on two sides of the island, the north and east sides,) was, to lay down a heavy stream, or bower anchor outside the surf, having a length or two of chain attached to it, to prevent the chafe of the rocks; a stout hawser was bent to the chain, its end taken on shore, to serve as a ridge rope for the shears. Two spars were then lashed together near their ends, and placed as shears, in the most suitable holes amongst the rocks, a tackle made fast to their head, from the shore, and when erect secured at the head to the hawser ridge rope, the inner pair of shears being erected first. One pair of shears being erected, the others were got up with less difficulty, each successive pair being secured to the ridge rope and well lashed. All the pairs of shears being erected and secured at the top, (on some stages amounting to fourteen and sixteen pairs,) small spars were then lashed longitudinally to each shear leg, about twelve feet from the surface of the water, cross spars at the same time being lashed between the shear legs, the fore and aft, and cross spars being well cleated; planks were then placed on the cross spars, and sometimes

form was slung, which was lowered, or raised, according to the height of the water.

The railway method of loading, as it was somewhat facetiously called, was an imitation of the plan adopted for loading salt, at one of the Cape Verd Islands. It was suitable to those who had no spars or planks to form a stage, although a much slower method of loading. A single spar, main boom or spare spar, from forty to fifty feet long, was erected by means of a pair of shears, on the shore, as near the surf as possible, at the same time placed about twenty feet above the water level ;—a heavy stream anchor, or bower, was then laid down outside the surf, about thirty or forty fathoms, having a length of chain attached to it, to which was made fast a stout hawser. The hawser was then carried on shore, rove through a top or snatch block, lashed at the head of the derrick, and its end attached to a powerful tackle, fastened to an anchor well secured amongst the guano or rocks. The hawser was then set up quite taut, a snatch block was placed upon the outer part of the hawser, with the hook downwards, with a small line attached to it, for easing it away and hauling it up again. The long boat being moored to the hawser, where it entered the water, two or more full bags of guano were either hoisted up, or hove up with a winch to the derrick-head, where a man was stationed, to hook them on to the travelling block; the bags were then eased down the first part of the hawser, to prevent their acquiring too much velocity, and then let go, reaching the boats very well : the empty bags, stores, and other requisites were then hauled up, and another lot of bags sent down. Improvements on this plan, by having two hawsers, the one parcel hauling the other up, were tried, but did not succeed ; a chain was also substituted for a hawser, but did not answer. The plan altogether was ingenious, good, and certainly very picturesque, but was found too laborious, and slow, whenever, the arrival of spars and planks enabled parties to erect stages.

The parties first arriving, commenced loading operations at the north end of the island, the guano being there deepest, driest and best, and the water smoother, than at any other part of the island. They chose such a portion of the frontage as they thought fit, but without any measurement or rule. Disputes rarely occurred for the first two months, as the arrival of vessels were not sufficiently numerous to cause any scarcity of frontage. These portions thus chosen by the first adventurers, were called Pits. From whence the name was derived might be difficult to determine, in all probability, from the casual remarks of some sailor, or labourer. One canny Scot attempted a new designation peculiar to his country, having in a violent quarrel with a neighbour about limits, said emphatically; "He wad fecht for his quarry." However, the innovation was over-ruled, and *pit* was universally the name, by which these important divisions were to be henceforth denominated.

It was soon perceived, from the constant arrival of vessels, as well as from the differences amongst those already there, that some system of maintaining the public peace, and keeping order and regulation, must be adopted. The subject was mooted, and about the middle of December, 1844, a highly respectable and worthy shipmaster present, Mr. M. B. Wade, was chosen Commodore, and Arbiter of any disputes occurring amongst the parties present. During his stay he acted in the most im-

partial manner, pleasing every one by his urbanity and kindness of manner, as well as the justice and rectitude of his decisions.

At the end of 1843, the number of vessels present amounted to nineteen, gradually increasing, although from this time some were constantly leaving with full cargoes; a greater number of arrivals, however, soon rendered the numbers present on the increase, and increasing difficulties arose respecting places to load and means of obtaining them. At first, every new comer, chose a new situation, until the whole northern frontage of the island was occupied, which was at that time considered the only place where vessels could be conveniently loaded. Fresh arrivals, however, rendered another system absolutely necessary, and masters of vessels, instead of choosing new pits more remote from the loading place, made arrangements with present possessors to assist them in completing the loading; and then paying them a fair valuation for the stage, succeed to their situations.

Such a state of things continued, vessels gradually increasing, until March, when it was deemed necessary to choose a Committee of the whole shipmasters and others present, to regulate the affairs of the various vessels, and settle any disputes that might arise. The committee was chosen, its meetings held on shore, at no definite period, but only when considered requisite, and no form or minutes of meetings were deemed necessary. The first Committee soon, however, fell into desuetude, partly, from a want of occupation, and partly, from the want of unanimity, and spirit, amongst its members, many of whom, did not consider any Committee necessary. New disputes soon however arose, labourers and sailors became restive and insubordinate, masters had no controlling power; and early in May 1844, H.M. steamer *Thunderbolt*, Commander Broke, having called on her way to the coast off Benguela, afforded an opportunity, which parties present did not neglect, to come forward and state their grievances. A new Committee was then chosen, consisting of fourteen members, from the body of shipmasters and agents present, and a few rules and regulations deemed necessary were adopted, and sanctioned by Commander Broke: at this time there were forty-five vessels present.

One or two of the unruly spirits amongst the labourers and sailors having at this time been pacified, and two sent away as passengers to St. Helena, paying their own passage, it was considered that the Committee could carry out its measures without any other assistance than their own. Vessels, however, continued to increase in number,—places to load became more difficult to be obtained,—the labourers and sailors, most of whom lived on shore, on the island, in tents erected for them, became more difficult to manage, the work being different to what they were accustomed, and the reins of discipline, to which they had been on board ship subjected, being completely loosened, they on many occasions not only became abusive and insolent, but often refused work through mere caprice. Masters of vessels also, newly arrived, and no doubt anxious to commence at once to load, deeming at the same time the guano on the island as much their property as that of any previous possessor or occupier, became inconsistent and extravagant in their desires, and, instead of waiting patiently as their predecessors had done to succeed by labour to a pit, attempted on one or two occasions to

commence at once in a manner contrary to the rules and regulations. Three of these new comers, incited by one of the triumvirate, who was in his own estimation a very clever fellow, but in reality an empty demagogue, inflamed by another who they made actor, and who appeared scarcely in his senses, and urged on by the third, who played snake in the grass, attempted to erect a stage in what the Committee considered an improper situation, and without consulting them. After due deliberation, and repeatedly warning the parties to desist, even writing them letters to that effect, the Committee resolved to put a stop to their proceedings, and accordingly proceeded on shore in a body, where at considerable personal risk from some of the offending parties, who were in a state of intoxication, they succeeded in putting a stop to the improper proceedings, and after due investigation, and the offenders signing bonds acknowledging their error, and stipulating to keep the peace for the future, they were allowed to resume their operations in a proper manner.

In June, one or two ships companies, amongst them, one commanded by a very clever, gentlemanly, kind person, mutinied to a man, and refused to do any work, on board, or on shore. The Committee proceeded in a body on board the vessel, and, after waiting to hear what they could urge in extenuation of their conduct, and lecturing them on the impropriety and illegality of their proceedings, could not succeed in bringing them to a sense of their duty. These difficulties, and many other minor ones, having occurred, with a constantly increasing number of arrivals of seeking vessels, the Committee deemed it necessary to send to the Cape of Good Hope, to the authorities there, to request some assistance for the protection of the British interests concerned in the guano trade.

For this purpose the brig Canning, of Bristol, was chartered for the sum of two hundred pounds, and assistance in loading when she returned, to convey to the Cape of Good Hope the Secretary of the Committee, unanimously chosen to represent the interests at Ichabo, and to get such assistance as he could, to the parties present. The freight of the brig was paid by almost every shipmaster present, all acknowledging the necessity. He accordingly proceeded to the Cape, when the Government authorities told him they could do nothing, as Ichabo was not within the colony, but recommended his application to Admiral Percy at Simon's Bay. There, he accordingly proceeded, and, after a long interview, and a complete exposé of the state of affairs at Ichabo, the Admiral agreed to sanction a set of rules and regulations for the government of all parties at Ichabo, and grant the presence and countenance of a vessel of war.

The Secretary of Committee at once drew up a set of rules and regulations, including those formerly in use, and such additional ones as he deemed absolutely necessary for the effectual regulation of affairs at Ichabo, submitted them to the Admiral for approval, which after consultation he did ; these rules were printed, and brought with the Secretary to Ichaboe in the *Clio*, sloop of war, on her way home from the East Indies, which vessel was directed to call for a temporary period, until the Admiral could spare a vessel from his station to come down and remain

for the superintendance of business, and the protection of the vast interests engaged in the guano trade.

The Rules and Regulations so sanctioned by the Admiral are here given, with some additions made to them afterwards, with the consent of the Senior Naval Officer present.

Rules and Regulations for the Government of all parties residing at the island of Ichabo, or coming there for the purpose of loading Guano.

1. Committee elected by general vote of all shipmasters in terms of notice duly given.
2. That the Committee shall have full power and authority to settle all disputes, occurring either at the anchorage or on the island, amongst all parties; to enforce the present rules; and, in all cases not provided for in these rules, they shall be guided by equity and justice, as well as the laws of England.
3. That the present loading frontage of the island, (according to the plan now in the hands of the Chairman of the Committee,) divided into pits, running longitudinally through the island, shall remain as now arranged; that the guano beyond the lines on either side shall be considered as free to any one; but no one shall, on any pretence, encroach on the lines of the already-made pits, under such penalty as the Committee may appoint.
4. That all vessels coming to load on their own account, or on account of any one not present, shall, as they arrive, according to the judgment of the master or supercargo, make the best arrangement they can with the present holders of pits; and, having made such arrangement, shall have full power to dispose of the pit to another.
5. That no person shall become a purchaser of pits, unless such as have vessels of their own, or by them chartered; and to prevent all monopoly of pits, that no person shall purchase, or become possessed of, more pits than he can occupy, and should any pits not be fully occupied, the Committee to oblige the holder to permit it to be occupied.
6. That no person shall erect a stage on the island in such a position as to endanger or interfere with the stages already erected.
7. That no person whatever shall, under any pretence, give, or cause to be given, or sell, or cause to be sold, to any labourer or sailor on the island, any spirits, or intoxicating liquors, more than the allowance agreed upon, viz.—three glasses per day.
8. That the Committee, on being requested, shall make surveys, and grant certificates of survey, of any damage occurring to vessels or stages at or on the island.
9. That no person whatever shall leave any sailor or labourer on shore at Ichabo at his departure, and that no agreement shall be entered into with any labourer or sailor, except it stipulates that the said labourer or sailor so agreed, shall go in the vessel for which he may work or some other belonging to the concern.
10. That all masters and agents shall, when called on, render to the Committee every assistance in carrying into effect their sentences, and supporting their authority.
11. That no vessel shall be moored in such a position as to give other vessels a foul berth; and the master to remove his vessel at the request of the Committee so soon as the weather permits.
12. That any person removing, or causing to be removed, landmarks, or divisions of the pits, placed by the Committee, shall, on conviction, be removed from the island, and the employer of the person so offending shall deduct from his wages, a sum equivalent to the loss of his services; that the Committee when requested to do so shall re-measure and mark off any pit;

that when any pit is transferred to another person, notice of such transfer shall be given to the Committee.

13. That the Chairman of the Committee may carry, at the mast-head of his vessel, a distinguishing flag, so long as the said flag does not in any way interfere with, or resemble, any flag or pendant carried by any of Her Britannic Majesty's Vessels of War.

14. That copies of the said rules shall be printed, and a copy delivered on board every vessel arriving at the island, by a boat sent by the Committee; and that on such a copy of the rules being delivered to such master, he shall be held sufficiently acquainted with the regulations of the island.

15. That the Committee shall keep a book containing an account of their decision of any cases coming before them, which book they shall show to any Captain, or other Officer, of any of Her Britannic Majesty's Vessels of War.

By Order of the Committee,
(Signed) MATHEW RACKHAM, Chairman.

Approved,
(*Signed*) JOSCELINE PERCY, Rear Admiral and Commander-in-Chief.

N.B. Since the printing of the above regulations it has been agreed that all vessels arriving at this port to take a cargo of guano shall pay £1 for 200 tons register, and an additional five shillings for every 100 tons above that, in order to defray the expenses incurred by the Committee for the general good.

That all Foreign vessels be permitted to load on the same terms as British vessels on promising to conform to the regulations of the island.

The above additional rules extracted from the Minutes of the Committee, by
(*Signed*) GEO. BURNETT, Secretary.

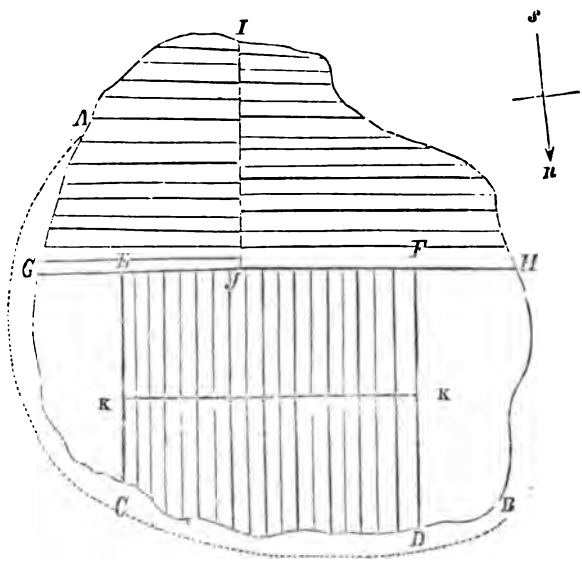
It will be apparent to the reader, that, from the formation of a committee, the Commodore had no farther power in arbitrating, or settling disputes, such a functionary, however, being a member of the Committee, continued to be chosen; he had a distinguishing flag, or a committee flag on board his vessel, fired a morning and an evening gun, for the commencement and cessation of labour; kept and victualled all prisoners whose cases were under consideration, all shipwrecked seamen, and labourers left behind by their vessels on the island; allowed the use of the cabin of his vessel for committee and deputation meetings, and until the Committee employed a boat, sent notices to parties whose attendance was required. Payment of all the expenses he incurred for flags, powder, and provisions, was made to him from the committee fund.

As the time of the *Clio's* stay at Ichabo, was limited, the most urgent cases only, were brought under Commander Fitzjames' notice; he attended the committee meetings while he remained, and by his attention to the cases brought before him, and his evident desire to do all he could for the general interests concerned, made himself respected and esteemed by all who met him. The meetings of committe, now consisting of fourteen members, were held twice a week, minutes of proceedings were regularly kept, written complaints alone received, and business conducted in a manner suitable to the constantly increasing number of vessels present. After remaining four days the *Clio* left for England.

Vessels continued to arrive in a far greater number, than the sailings; and the difficulties of procuring loading sites consequently increased, bringing with it of course, dissatisfaction at the present occupiers, who

were said to be usurping the whole frontage. The northern frontage, which had been originally commenced, and divided as before described, had been in May measured out on a graduated plan, with the name of the present occupier, marked opposite his pit; no other frontage was at this time (the beginning of August,) thought of, vessels preferred waiting to transporting the guano from a distance, *although no hindrance was ever made to any one working, either the neutral ground, or commencing from the south end.*

The guano on the island, had, up to the present time been worked, according to the following sketch, which although not strictly correct as to measurement, is still sufficiently so, for illustration:—



The above Diagram shows, not the exterior lines of the island, but those of the guano upon it; from A to B, following the dotted lines, was the only place where stages could be erected; between C and D was the original frontage, up to August, 1844, the portion of neutral ground (KK) never having been worked, each vessel following her predecessor in the pits between C and D, according to arrangement between the masters; the pits being worked longitudinally, according to the regulation, from north to south. These original pits, up to the transverse line, K K, were worked out in September, 1844.

During the months of July and August, the influx of vessels was so great, that in the latter month, nearly 300 vessels were present; loading places, as it may be supposed, became difficult to be procured, not only labour, but money was given to succeed even then, many were disappointed, all eagerly desiring a northern frontage in preference to entering the neutral ground. When loading places and stages became thus valuable, many shipmasters, and some parties from the Cape, estab-

lished themselves at the island, in addition to the parties who remained from the first, loading their chartered vessels; these parties obtained possession of pits, and professedly sold them for the purpose of loading vessels, charging a sum, more or less exorbitant, according to the demand. Much murmuring consequently occurred among the newly-arrived masters of vessels, and very justly, at the idea of third parties, some of whom had never been interested in vessels, coming to the island, and establishing themselves on it, and charging large sums of money for the use of the pits, which they had never legally obtained. Several attempts were made in the Committee to put such practices down, but without avail, as the majority were more or less interested, in the system introduced.

The neutral ground, containing as good guano as any on the island, now began to be occupied, the guano being conveyed to, and loaded from, the northern stages ; some portions of the neutral ground were nearly worked through, when warning was given to the parties that, according to the regulations, they could not work farther than the lines E C and F D, as they would evidently cut off the parties possessing the side pits, which parties having either possessed them from the commencement or purchased them expected, very justly, to keep them of the same value when they did not longer require them, and sell them to some successor. It will be apparent to the most casual observer, that from the commencement, some system of division of pits, and plan of working must have been established, and equally apparent, that the system once established by the mutual consent of all present, could not be over-turned every month, to please the late arrivals, who unjustly expected the same advantage as the first. The maintaining of the rules and regulations by the Committee ;—their prevention of encroachment on the established lines of pits, their refusal to permit the last arrivals, to oust the first, from their possessions, the increase of the number of the discontented, who were fast arriving,—all tended to render the situation of the Committee, unsupported as they were by anything, but their firmness and rectitude of conduct, and the sanction given by the Admiral, to the rules and regulations, extremely onerous and disagreeable ; they were, therefore, rejoiced, at this critical juncture at the arrival of H.M.S. *Isis*, commanded by Captain Sir John Marshall, sent by the Admiral to support the Committee, and carry out their measures, *so long as he considered them just and reasonable.*

As the *Isis*, or some other vessel was expected, a petition to the captain had previous to Sir John Marshall's arrival, been got up amongst the discontented, praying for a re-division, and re-measurement of the pits, *id est*, that the pits now occupied should be taken from the occupiers and given to them, and for several other causes, and unimportant matters ; but urging as their *siné qua non*, the removal of the gentleman from the chair, who had occupied it from the commencement of the Committee, and who had rendered himself disagreeable to some of them, by what they termed positive insult ; but what was only known to be, a kind of honest John Bull bluntness of manner.

Sir John received the deputation and the petition, at the same time resolving to hear both sides, and judge for himself ; and the result proved how far he supported their measures, or accommodated himself to their *Utopian* views.

At this time, the commencement of September, 1845, there were about 200 vessels present, many having arrived in a very short period; it was, therefore, deemed necessary to increase the Committee, which was accordingly done, to the maximum, viz. twenty-four members, its minimum being twelve, the number being always regulated by the number of vessels present. The Committee, instead of being chosen as formerly, was now to be elected by the general votes of the ship-masters present. It was never attempted to be denied, that a general election, *as at first followed*, was the proper plan; but it must be explained that the plan fell into desuetude, solely from the masters of vessels not coming forward to use their privilege, so much apathy and indifference did they show to what was intended for their own benefit. In consequence of this indifference, the first regulation was penned at the Cape, the member leaving, naming his successor, who was considered elected, when sanctioned by the Committee. This appeared so wrong to Sir John Marshall, that he at once proposed a general election, as he could not credit that people, who themselves acknowledged the necessity of a Committee, would not come forward and take some interest in the nomination and election of members. At the first three elections under the new regulations, the names of all the voters present were taken down by the purser of the *Isis;* at the first election about fifty voters came forward, at the second seventeen, and at the third three, and that at a time when there were 200 vessels present. From that time, until the conclusion of the Committee's labours, it was as before self-elected, although twenty-four hours' notice was invariably given of an election. Yet, notwithstanding such apparent apathy and indifference, the necessity of the existence of a Committee never was for an instant questioned, except perhaps by a few who might expect to profit by a state of anarchy and confusion.

The newly elected members, all of the discontented party, seemed to think that their only labour was to vote in such a manner as to secure their own interests; some of these, who soon retired from the Committee, confessed this to have been their motive for joining it. Accordingly, a motion was brought forward for an entire re-division of the pits, and alteration of the divisions. It was apparent to every thinking person that such a measure would have been highly unjust, and besides as entirely unsatisfactory, as the parties arriving a month afterwards would have at once said, let *us* have a re-division as well as others, and so get possession of pits, without giving the same equivalent as the present holders. It was generally believed in England, and even by many in Ichabo, that certain leading members of the Committee made use of their influence to get and maintain a great part of the working frontage. This was strictly untrue, no such influence ever having been used at any time for any such purpose, neither was any frontage held by any such parties which was not constantly occupied by their own vessels chartered and agreed with in England. Neither did the parties so alluded to, from the commencement to the end of the removal of the guano, ever sell any cargo, or cargoes, except in terms of charter parties, or agreements made in England,—they never made a single arrangement at Ichabo; this much the world ought to know, as much

misapprehension exists on this point. It was urged by the discontented that the guano was as much theirs as the parties working it and occupying it. In an abstract point of view this appears very feasible and true, but it will not bear the test of argument. So might parties have argued, who following the first settlers to an uninhabited country, after they had cleared away a portion of ground improved it, and erected buildings on it, say this ground is as much our property as yours, and as what you possess suits our purposes better, having certain conveniences attached to it, you must give it up to us, we having the same right to it as you. Some of the first comers to Ichabo left England perfectly prepared for a long residence, with arrangements completed for a constant supply of chartered vessels, to carry out the speculation entered into,—they came at considerable expense, and, confessedly, at a very great risk,—they were even scoffed at on the Exchanges of London and Liverpool as fools, who were in pursuit of a chimera. They arrived—selected small portions of the frontage,—erected stages opposite them,—brought labourers, implements, provisions, and vessels,—and after an elapse of six months, when their first cargoes had gone to England and realized a good price,—when they had not only pointed out the way, but proved the value of the speculation,—when they had opened to our agriculturists a sure means of relief from their lately depressed circumstances,—when they had given an impetus to our mercantile marine, never before in such a lamentable state of ruin,—when by the employment of such a number of vessels in this trade, they had improved freights in all parts of the world,—their places occupied only for the purposes of their own trade, were to be taken from them, for the use and benefit of parties coming at the eleventh hour, with no claim whatever.

At this time it was also proposed that all vessels should load in turn; this system of rotation would have been manifestly unjust to parties who had chartered vessels, and who had made arrangements for loading them from the commencement as stated above. It was also found impossible to establish any system of rotation for several reasons, all very apparent to parties who were present. In the first place there must have been some paid authority to remain and register all pits, vessels loading, and vessels arriving, as it is evident had such a system been established no one would have resided at the island. Supposing a vessel arriving in turn of 800 tons, and having a crew of forty men, immediately after her arrives a schooner of 100 tons, and seven men, the first vessel so to be followed in a pit (which may have begun to load, or perhaps not, as they would frequently have vessels present to each loading place,) might be a vessel of 100 tons, with seven men, the next might be a large vessel with more men; it must be apparent that the large vessel would follow the smaller one with pleasure, as her large crew would soon complete her loading, but what would the master of the small vessel say, or when would he have loaded the large vessel, it was his turn to follow, with his small crew. Then again, an active, enterprising, man of spirit would be bound to follow a man who, from peculiar habits, paid no attention to his business, and with no control over his crew, would be a complete [illegible] to all labour. Such instances were frequent, and would [illegible] rotation, apart from its manifest

injustice, quite impossible. Another measure was at this same time strongly urged upon the Committee's attention, which would have prevented many disputes, and many of those exorbitant and ruinous charges, which were made for cargoes, at the same time would have enabled all parties to suit themselves on arrival, where they deemed it best for their interest to do so. All vessels coming in, to agree with any party they might think proper, to give such an amount of the labour of their crew as they might agree upon; but to pay a sum not exceeding £5 per 100 tons for the guano loaded and the use of the stage. This proposition, which would certainly have been easily carried out, and would have prevented much imposition, was, however, at once negatived, even by the parties recently arrived, who, although they might pay a considerable sum for a cargo, expected to get a larger from their successors ; as the number of seeking vessels was constantly increasing, such a measure would have enabled vessels of suitable sizes to come together; but still it is supposed it would not have prevented secret arrangements between parties, for the payment of additional sums to that above mentioned, when the number of vessels present rendered competition great.

Sir John Marshall at once acknowleged the just claims of the present occupiers, more especially when he knew that *they never had prevented any one working in the neutral ground, or commencing at the south end and working towards the centre.* As, however, the loading places were all on the north and east side of the island, a plan of accommodating the other frontage to such loading places was agreed to. The island was divided from east to west by the line G H, in such a way as it was deemed probable all the pits would work out at the same time. A longitudinal line I J, north and south, at right angles with the line G H, was then made, and a series of pits from the east and west sides made up to it. All parties, even then, were not satisfied, and as more vessels continued to arrive, their commanders were continually expecting and demanding new arrangements, which it was impossible to comply with, as the whole frontage of the island was now occupied, and not permitted to remain unworked, by one of the rules.

As it may be supposed, the labours of the Committee were fast on the increase. Three meetings each week were held on board the Commodore's vessel, each meeting commencing at 10 A.M. and seldom ending until 3 or 4 P.M., often later. Sir John Marshall, accompanied by one of the officers, regularly and punctually attended every committee meeting ; from the moment of his arrival, he devoted all his time and attention to the committee business, and, although suffering frequently from illness, allowed neither that nor the frequent bad weather to interfere with his attendance. All complaints, whether from sailor or master, were received in writing, addressed to the Committee; they were read in the presence of the whole, and, if a matter requiring opinion, it was given ; if requiring much investigation, and the examination of witnesses, it was referred to a deputation of the Committee who enquired into it, examined the necessary witnesses, and sent in their written report, and recommendation to the next Committee. These deputations were always attended by a commissioned officer of the vessel of war, who was present to protect the interests of the complaining parties

as well as those complained of, and see justice done to both, approving with his signature the report of the deputation.

These reports of deputation were read before the Committee, who gave their approval or dissent, and confirmed the award of the deputation, if deemed correct. At first, it was deemed best for the deputation to call on board the several vessels from whence the complaints proceeded; this, however, was afterwards found inconvenient, and parties with their witnesses were summoned on board the committee vessel, when the deputation sat often the whole day following the general committee meeting. As many complaints were continually occurring from disputes on shore, respecting boundary lines, and measurement of frontage, a permanent deputation, consisting of seven members, three being a quorum, was formed, to attend on shore and settle all disputes when called upon; that deputation also sent in its written reports to the general Committee. Members of the other deputations were chosen by rotation.

The instructions given to the members of the Deputations by which their investigations were to be guided were as follows :—

Reports were headed.

"At a meeting of the Deputation of the Committee for managing mercantile affairs at Ichabo, held on board the ——— on the —— to enquire into the complaint of —— against———in presence of Lieut. ——— of H. M. S.———

"The complaint to be read to the accused, and if he pleads not guilty, the witnesses to substantiate the complaint are to be first examined, their examinations written down, and signed by the witness. Witnesses never to be examined in the presence of the accused,* and always separately. In examining the witnesses, no leading questions to be put.

"After all the witnesses are examined, the accused party to be brought in, and hear the evidences of all the witnesses against him read, to be then called on for his statement in defence, and to name his witnesses; at the same time before making his statements, he must be cautioned to say nothing to criminate himself, should the case be serious.

"After all the accused's witnesses have been examined, the Deputation should consider the evidence adduced on both sides, placing such a value on the testimony of the respective witnesses, as may appear to them just; and draw up a report on the case, such report always to include *all the points* mentioned in the complaint, to state whether all or what part of the complaint is substantiated, and then recommend the case, either to the consideration of the whole Committee, if serious; or, settle it by a reprimand, if that be deemed sufficient; but in no case to give a recommendation to any master of a vessel or other person, to punish any one, without that recommendation first having the sanction of the Senior naval officer present.

"Members of Committee acting on Deputations, should always act

This seems to demand explanation, as it is not an usual mode of proceed- ut it was found absolutely necessary at Ichabo, where the majority of ints, were from sailors or labourers against their masters, and who were awed by the masters' presence, as never to feel inclined to tell the truth, e their complaint in an open manner.

with great temper and discretion, and never forget, that they are not acting while on Deputation as Magistrates, but only as parties called on to give their opinion of the cases coming before them for the decision of the Senior naval officer present, and in the absence of any naval officer, for that of the Committee ; should they not deem an admonition or reprimand sufficient."

During September, very soon after the arrival of the *Isis*, Sir John Marshall's attention was drawn to the state of health of many of the seamen and labourers, from complaints coming before the Committee. It was found on enquiry, that few masters of vessels issued any fresh provisions, or antiscorbutics to the crews; that in consequence of the nature of their occupation, almost constantly wet, and the nature of their food always salt, and often not of good quality, scurvy was very prevalent. He at once brought before the Committee a resolution, to insure to each person employed in loading guano, three fresh dinners every week, to consist either of preserved provisions, or fresh, which now began to arrive from the Cape of Good Hope. This very beneficial and humane measure was at once passed into a law, notice given on the island, and fines attached to the non-performance of the regulation ; and although many of the masters were very unwilling to accede to it, still the crews being aware of the law always complained, and got what was stipulated. The dreadful state in which many of the crews had up to this period left Ichabo, the still worse state in which they were found at St. Helena, as pointed out to us by a medical gentleman resident on that island, the many deaths which occurred on the passage home, and the numbers who arrived there in a dying state, or with constitutions completely shattered, proved the excellence, and humanity of the new regulation. It was soon apparent to any observing person, who remained at Ichabo, that from this time, scurvy was much less frequent.

From the great numbers of vessels now at Ichabo, and the numbers still arriving, the business of the Committee became very great, and the duties of the members very onerous, and responsible. The officers of the *Isis* with her boats and their crews were constantly employed, one officer and boat's crew being constantly occupied in regulating the berthing of vessels, which from the crowded state of the anchorage, and the constant arrivals, was a very irksome and disagreeable duty. The Committee, now so necessary to carry on the general business of the shipping, kept all its members continually occupied, particularly the official members, so much so, that a clerk was found absolutely necessary to assist the Secretary in his duties. The boarding of the vessels sailing and arriving, was also an arduous task, as well as the many messages to be conveyed, summonses to be delivered, and deputations to be waited upon and conducted to and fro in the execution of their duty.

A boat and boat's crew were, therefore, now absolutely necessary for Committee purposes, and to defray this expense as well as many others, such as books, paper, clerk, flags, powder, and the sustenance of prisoners, or destitute seamen and labourers left behind from their vessels, a Committee fund was necessary. It was therefore resolved to levy a small sum, on each vessel present, and afterwards arriving, amounting to £1 for 200 tons register, and 5 shillings additional, for each 100 tons above 200. At the same time it was resolved by the Committee, that

for the proper fulfilment of the rules and regulations, each master should deposit the Muster-roll of his vessel in the hands of the Senior naval officer present, and in the absence of any naval officer, in the hands of the Chairman of the Committee; the Muster-roll to be received, and returned without charge; all transfers of crews or labourers made during the vessel's stay, were to be made on board the vessel of war present, or in presence of the Chairman of the Committee.

Any balance of committee funds which might remain, after the fulfilment of the objects contemplated, was to be appropriated to some naval charity. Although it must have been apparent to every one, that a great necessity existed for such a fund, still it is astonishing how much opposition the payment of this small sum met with, amongst many, parcularly the mauvais sujêts. Orders for the amount were given with reluctance, even when the shipmaster was known to be possessed of money, and many a threat openly held out that they would countermand the payment. It is to be hoped that shipowners will look narrowly into the character of such men, as they may be certain that coolly resolving to cheat others, they would as readily cheat their employers.

Since the commencement of operations at Ichabo, the greater part of the crews of vessels employed in loading guano, and all their labourers, were in the habit of constantly living on shore on the island, in tents erected for that purpose. It was supposed that their thus living on shore facilitated the work, and was certainly a boon to many labourers, who, hitherto unaccustomed to a nautical life, found great difficulty in getting ashore, having to climb up the stages from a boat surging to and fro in the sea.

At the commencement of October there were altogether present at Ichabo about 6,000 seamen and labourers. At least three-fourths of these were located on shore ; and, as it may be supposed, the part of the island which had been cleared away, was completely covered with tents. These tents gave room for much skulking during the day, and much mischief at night. They were so thickly planted as to render it almost impossible to detect a labourer or seaman if absent from his duty. At night they were scenes of riot and disorder, similar to any grog shop. A greater quantity of spirits was issued than allowed by the regulations ; if the master was not cognizant of this, the mate connived at it to suit his own purposes, and the bacchanalian orgies which were held on the island, were almost beyond belief. The numerous complaints against, and consequent examination of, parties, coming before the deputations of the Committee formed ample proof. Many worthless seamen and labourers had also left their vessels, (the masters no doubt conniving at their escape,) and became a complete pest to the industrious on the island, roaming from tent to tent, in every one's mess, and no one's gang. They put much mischief into the heads of the quiet and orderly men, they drank their grog, purchased more with the fruits of their labour, or their present theiving of guano; and scenes were enacted at Ichabo, a recital of which would cause the most abandoned to blush.

The consequence of all this, was numberless complaints coming before the Committee of various outrages which they found it impossible either thoroughly to investigate, or sufficiently control. The number of labourers, not on the articles of any vessel constantly increased, and,

although an attempt was made, on one occasion, to muster, and get hold of the unattached, it was found impossible, from the facility of getting on board vessels afforded them by parties whose interest it was to do so. To put an end to all these various disorders, and preserve order and regularity, amongst the many persons now employed on shore, it was proposed to Sir John Marshall to cause all the men on shore to go on board their vessels every evening, and at the same time to remove every tent from the island. This measure, although it prejudiced the interests of the party proposing it, more than any other, was immediately brought before the Committee, and after considerable hesitation on the part of some members, agreed to. Notice of its becoming a law was duly given, and a time appointed for the removal of the tents. Much opposition to the measure was talked of amongst the labourers and seamen, and even amongst the more foolish and ill-behaved masters; threats of open opposition were even held out, in presence of some of the junior officers of the frigate; and at one time serious opposition to a measure so necessary to the welfare of all present, was contemplated. Sir John Marshall, however, with his accustomed energy and determination, took most effectual measures to carry out the object in view. A Lieutenant of the *Isis*, accompanied by the Secretary of the Committee, visited every individual tent, and giving due warning, that by noon next day it must be down, and taken on board the vessel it belonged to, left no plea of ignorance to be urged for a non-compliance with the order.

Many a curse, deep though unheard, was that night heaped upon the heads of the b——y Committee as they were emphatically called, not only by the seamen and labourers, but by the masters themselves, many of whom we are sorry to say, enjoyed themselves in the tents, in ways not always deemed the most refined, or gentlemanly. Up to a late hour of the day on which the tents were appointed to be pulled down an opposition was attempted by a few, Sir John however, was too well prepared. At 1 P.M. he pulled towards the landing places with the frigate's boats completely manned and armed, and landing half the marines, and a few blue jackets, went round the island, overawing by his presence the disaffected, and completely quelling by a judicious display of force any attempt at resisting the order. At 5 P. M. not a man remained on the island, but the Marine Guard, which henceforth, landed every evening to clear the island, and prevent any one landing until morning. Thus was accomplished quietly, and without disturbance, through the excellent measures of Sir John Marshall, a plan the best calculated to ensure peace and good order, of any that ever was adopted at Ichabo.

From the time of his arrival up to the time of his departure, Sir John Marshall, by his unwearied energy and perseverance in the cause of all the parties concerned in the guano trade, by his urbanity and kindness, his ready access to all the seamen and labourers, and his unremitting attention to the whole, rendered himself respected, and beloved; and certainly deserves the best thanks of the Merchants and Underwriters of Great Britain.

The removal of the tents, and the consequent clearing of the island every evening by the marines of the vessel of war present, was one of the best measures adopted; it tended to keep up that discipline amongst the various crews, which had been seriously relaxed, and prevented the tents

being used for the purposes to which they had been hitherto devoted, particularly drinking. It is with great sorrow that we record it, but so great had been the intoxication amongst masters of vessels, that Sir John Marshall recommended a rule, which was passed in Committee, and promulgated on shore, that any master of vessel seen intoxicated on shore, should have his name registered in the minutes of the Committee. To recount all the minor rules and regulations, which were enacted and carried into effect for the general benefit, would be both tedious and uncalled for ; the Committee were ever actively employed, and their duties particularly at this time were not only arduous, but harassing; and the members often neglected their private interests, for the public good.

During the month of October, when every thing was going on as smoothly as it could be expected to do, with so many incongruous materials to work with, H.M. Steam sloop *Thunderbolt*, Commander Broke, arrived from the Cape, with orders for the *Isis* to proceed to England, and to remain in her situation at Ichabo. Commander Broke, in every particular carried out the former measures of the Committee, attending the meeting most regularly and punctually, and causing his officers to attend the Deputations and other duties.

During the latter part of October and November business was conducted as usual, a continued series of complaints and cases of all kinds coming before the Committee; the guano, which in September had only been removed, to the extent of 90,000 tons, was now fast disappearing, from the vast number of vessels present; and from September 1844 to the middle of February 1845, so great was the number of vessels loading, and such the activity of their crews, that the remaining 110,000 tons were entirely removed. Vessels in numbers continued to arrive, many respectable houses of great standing, and credit, who at first laughed at the speculation, now entered into it in an extensive manner. During the month of January there were about 450 vessels present.

As it may be supposed from the numbers present and those still arriving, there were many disappointed always present, some of these were unreasonable, indiscreet, and so irregular in their conduct as to demand the frequent interference of the Committee. Agreements made in Ichabo for cargoes, were now frequently broken, the parties making them having received the labour, and in many cases the money or bills stipulated when unable to fulfil their arrangements. Many of these arrangements were made without the least hope of being fulfilled, at least with no probability, and in consequence, protests were every day being handed into the Committee, and recorded on their minutes.

Early in December, Commander Broke went to the Cape, although pressed by the Committee to remain, and offered supplies at the expense of the committee fund. At the most anxious time, since their operations commenced, and at the time, which certainly most demanded the support of a vessel of war, they were left to their own unaided exertions. A strong remonstrance was however forwarded to Admiral Percy, pointing out the necessity of the presence of some vessel of war, to sanction and carry out the decisions of the Committee. This letter was promptly responded to, by the immediate return of the *Thunderbolt* to Ichabo on the 25th of December 1844. On her leaving, the Committee certainly anticipated much mischief, although, at an extraordinary meeting held

the day after her departure, it was unanimously resolved to act with increased unanimity and energy, and endeavour, by every means in the power of the Committee to carry out the system hitherto followed, and enforce the due performance of the rules and regulations. Several of the disaffected and discontented now held meetings together, the greatest number ever assembled being twelve. They were, however, led by a violent fiery spirit, who had already been convicted of infringing the laws, and bound down to keep them for the future. They disagreed so much amongst themselves, that they could not agree on any thing, during the *Thunderbolt's* absence.

A few days after her return however, one or two of the masters landed on the island, and having inflamed the sailors and labourers with spirits, commenced an attack upon the pits, or rather the little that was left of them, during a committee meeting. The attack was reported, the Committee instantly repaired on shore to the scene of disorder, where they were shortly afterwards followed, by Commander Broke, and the marines and seamen of the *Thunderbolt*. After considerable parley, and the use of some force, the parties were driven away, the island cleared of every one, and a guard left on shore to prevent any landing, the names of the parties attacking the pits being at the same time taken down. Next day the boats of the *Thunderbolt* rowed guard and prevented any landing, while an extraordinary meeting of the Committee proceeded to investigate the circumstances connected with the tumult, and examine the parties caught in the disturbance. At the same time, the *Thunderbolt*, which had formerly been anchored about a mile from the island, was now brought close to it, inshore of all the vessels; and thus prepared, and ready to keep a surveillance over the loading, and prevent any future emeute.

During the patient, and lengthened investigations, which took place, and which ended in the conviction of four masters of vessels, and one or two mates, the deck of the committee ship was crowded by about seventy of the masters then present, at Ichabo, all of course disappointed in procuring cargoes, *but who although certain of not being able to procure them, refused to proceed to any other place.* They requested to be allowed to hear the committee proceedings, became noisy and impatient. Their request could not of course be listened to, and a written answer to that request being prepared, Commander Broke, accompanied by the Secretary of Committee, went out, and the Secretary having read the reply, Commander Broke in a few words most distinctly and clearly placed before them, the folly of the proceedings of the offending parties. Never were so few words so well spoken or so much to the purpose, one distinct question being very pertinently put. "Could all of you now present obtain a cargo of guano were you allowed to attack the pits, and create a general scramble?" One of them without hesitation, answered, "No, not 50 tons each." Commander Broke, therefore, in a few decided sentences dismissed the assembly, and proceeded with the examination of the offending parties.* Four of the masters were convicted on clear and undoubted evidence, and were sentenced, with their crews, never

* It will, perhaps, be scarcely credited in England, that these men, who were themselves satisfied they could not procure cargoes, would still continue to lay at the anchorage, instead of at once proceeding to seek freights elsewhere.

again to land on Ichabo, or leave their vessels; nor was any person permitted to visit them while they remained at the anchorage. For the purposes of carrying out these awards, marine guards were put on board the respective vessels, until they departed for various destinations.

Matters now proceeded tranquilly and peaceably, until the middle of February, when the guano being all removed, the Committee was dissolved; a motion having first been made by the Secretary, and unanimously carried, that all the books, plans, and documents, belonging to the Committee, should be conveyed by Captain Broke to the Admiral at the Cape, to be by him forwarded to the Chairman of the Association of Underwriters at Lloyd's, in London, to be by them kept for public reference.

The exposed nature of the anchorage will be seen from the foregoing plan.

THE AFRICAN GUANO TRADE.

Part II.

The whole littoral portion of Southern Africa, from the Cape of Good Hope to Walwich Bay, presents one monotonous unvaried scene of bleak barren rocks, or arid sand-hills, not a particle of vegetation anywhere appearing, to relieve the prospect. Table Bay, as well as Saldanha Bay, is too well described, in the various books of directions, to require any comments here. In Saldanha Bay, or rather on the Island of Malagas, at its entrance on the northern side, guano has been found. Being of course within the boundary of the Cape colony, government resolved to sell it, charging £1 per register ton, new measurement; they formed stages, and appointed officers to superintend its removal. The guano found here, is not nearly so good generally as the best Ichabo, but although it does not possess so many active properties as the former, still its permanent effect on the land is said to be greater. This guano, is said to be mostly produced by the gannet, called in Dutch, Malagas, from whence the island derived its name. It is a pure guano, unmixed with sand, or other extraneous matter; but found in a very wet state, requiring to be dried before shipment. The labourers on this island, although under the surveillance of a magistrate residing in the neighbourhood, behaved quite as rudely, and with less respect to their superiors, than at Ichabo. They were a mixed class of coloured people, principally Malays, were procured from the Cape, and employed by many vessels in preference to white labourers; the latter becoming insubordinate through the incitement of some bad characters amongst them, at last proceeded so far, as to declare all work at an end, unless the masters of vessels would agree to employ no coolies; they even proceeded to attack these inoffensive men, and threw some of them from the wharf into the boats, inflicting severe injuries on many.

So soon as this state of affairs reached the ears of Mr. Marsh, the magistrate, he came down to Hoetjes Bay, amongst the shipping, assembled the masters, and having made them, as well as the mates, special constables, proceeded to the island, and seized the ringleaders, quelling the disturbance by a prompt and energetic display of authority and force.

The guano originally on the island, amounting to about 60,000

tons, is now (August, 1845,) almost removed ; its existence has proved a boon to many vessels disappointed of procuring cargoes at Ichabo, and saved many of the over-speculating parties from great loss.

Saldanha Bay possesses a great extent of most excellent anchorage, particularly in Hoetjes Bay, where vessels may heave down to the rocks. It is, however, at present almost destitute of water, as although there is a spring of good water at the Residency, in the southern arm of the Bay, still it is two miles distant from the nearest anchorage, and only obtainable at high water in flat-bottomed boats. Water in sufficient quantities, for the supply of shipping, might be brought to Hoetjes Bay in pipes from a farm in its neighbourhood, about three miles from the beach. This is worthy the attention of the Government, as in the event of a future war this might become a place of resort, being both safer and better anchorage than either Simons Bay or Table Bay. While mentioning this circumstance, it may be further remarked that, it is very singular, a colony, so valuable in many respects, should meet so little encouragement from the Home Government. The great want throughout the colony is water ; the farmers often in dry seasons being unable to grow corn, and losing many cattle from want of pasture and water. It is supposed, and with considerable justice, from a consideration of the geological features of this part of the colony, that water in abundance could be procured by sinking wells ; the present Dutch inhabitants are generally too apathetic to try, but in one instance, one of the more enlightened procured good fresh water from a well about thirty feet deep, and not a mile from a large salt pan. Government might, therefore, at a trifling cost, send experienced parties to bore in various parts of the colony for water, and it is to be hoped the present active and energetic Colonial Secretary will devote some of the funds obtained for guano, to the accomplishment of this purpose.

The neighbourhood of Saldanha Bay abounds with game, affording sport to the farmers when not occupied with their farming operations. Deer of various kinds are very numerous, wild guinea fowl, wild turkeys, partridges, hares, jackalls, ostriches, and baboons, are found in abundance, the latter are somewhat dangerous to attack, especially if surrounded. The Bay itself abounds with fish of many different kinds; the farmers resorting to the shores at particular seasons, with their waggons and nets, and catching and salting a supply for their families and dependants.

From Saldanha to St. Helena Bay the coast is rocky and rugged, having many out-lying rocks some distance from the shore, which as well as the Britannia rock, in the open of St. Helena Bay, require great caution in navigating this part of the coast. On some detached rocks in St. Helena Bay, called the Paternosters, there was about 3,000 tons of good guano, now all removed. During the month of July, two of the vessels, when about two-thirds loaded, parted from their anchors at this place, in consequence of a heavy sea, caused by a N.W. wind, they went to pieces amongst the rocks, the crews being saved. The guano at this place was also shipped under the superintendence of Government.

Proceeding to the northward, there are no out-lying dangers of any extent yet known, except the reef off Cape Voltas, to hinder the safe navigation of this coast, of which Morrell gives a very good general

account. In Donkin's Bay there is some guano in detached portions scarcely worth removing, although the Government have now a watch upon it. Still farther to the northward, on Oliphant or Eliphant rock, at the mouth of the river of the same name, guano of an excellent quality has been found, which is now in course of shipment by Government license,—there are about 1,500 tons in all. The anchorage here, except in summer, is dangerous, one small schooner having already been driven on shore and become a total wreck, from the sea caused by a north-west wind.

Between Cape Voltas and Possession Island, a small island lying close to the shore has been long known to the Cape Sealers by the name of Plum-Pudding, on which Guano was found. Although the Orange River has been hitherto considered the northern limits of the Cape Colony on the coast, still by some old ordinance or law which the Government found, or said they did, the boundary of the colony on the coast extended to the twenty-fifth degree of south latitude. This, of course, included Plum-Pudding Island, to which they despatched a party in the beginning of February. On the arrival of the party they found several vessels already in the process of loading, but, instead of 40,000 tons, which the island was said to contain, only about 2,500 have been removed. One vessel, after completing her cargo, parted from her anchors and became a total wreck. The Government, who at first appeared determined to make the parties pay for licenses, afterwards withdrew the officer, saying that from the smallness of the quantity it was not worth their attention. This island is in all probability the Secos Island of the charts, which has been looked for in vain by several vessels.

From the Albatross Rocks, a short distance to the southward of Possession Island, a small quantity of guano was removed about the beginning of 1845.

Possession Island, which has long been known to Sealers, has good anchorage under it; and for a limited number of vessels well sheltered from the sea. A sunken rock has however been found in the middle of the anchorage, on which a vessel struck and damaged her rudder; two shoal patches of rock have also been discovered by H. M. steam-sloop *Thunderbolt*, between the island and the main land, about two-thirds across from the former, and in the northern entrance. These rocks require caution in vessels passing, and it is regretted that their correct positions cannot now be given, from the loss of the memoranda respecting them. Possession Island contained at first about 4 or 5000 tons of guano at various detached places of its surface, all of it of very inferior quality, being much mixed with sand, and the hair of seals as well as their decayed carcasses. It is no doubt composed of the decayed bodies of the numerous seals, whose bones are yet so plentiful, and whom Morrell supposes to have been killed by some pestilence, or enormous pillar of sand which his fertile imagination conjured up for the purpose. By whatever means they may have been killed, it is certain they were numerous, although not so much so as Morrell's millions, would lead us to suppose.

From some rocks between Possession Island and Pedestal Point a small cargo of guano of indifferent quality was removed.

The entrance to Angra Pequeña harbour, forms a very conspicuous break in the coast, and may be readily known from Pedestal Point. The Admiralty chart is most correct, and from it any of the various entrances and anchorages may be most readily known. There is no pedestal however on the point, nor any vestiges or remains of one, which it is to be presumed, some ignorant and avaricious persons may have destroyed, in the expectation of finding something valuable underneath. If it was originally of marble as described, the marble must have been brought to the spot from some other coast, as there is no marble anywhere in the neighbourhood, although there is an abundance of quartz which may have been mistaken for it.

On a small island to the southward of Pedestal Point guano was found in the end of 1843; being of inferior quality it was not removed until July, August, September, and October, 1844, when the difficulty of procuring loading places at Ichabo, induced vessels to clear it away; about 8000 tons were removed from this place.

Two of the islands in Angra Pequeña harbour, called Penguin and Seal Islands, contained detached portions of guano of an indifferent quality, apparently, produced principally by the same cause as that on Possession Island. It was all more or less mixed with sand and stones; it is now all removed, it is believed about 3000 tons in all.

The harbour of Angra Pequeña with the neighbouring bays, form as the chart will show, most excellent anchorages; inside of Penguin or Middle Island, a vessel may be hove down to the rocks, and from many articles found on the islands, the harbour has been the frequent resort of Sealers and Whalers.

Ichabo Island is in 26° 18′ south latitude, and 14° 58′ east longitude, the latter being deduced from Captain Owen's position of Pedestal Point, by chronometer, at the interval of a week between the respective observations, all the observations for latitude and longitude being made by an Artificial Horizon.* This island is about three-quarters of a mile in circumference, surrounded on the south-west and north sides by rocks extending in some places about a quarter of a mile from the shore. It is about three quarters of a mile from the main land opposite, and about five miles from the outer part of the dangerous reef, off the point of land to the south-east of the island. This reef is extensive and dangerous, many parts of it being under water, and not to be discovered when the sea is smooth. There is a passage through the reefs but it is dangerous, and was only adopted from necessity by some vessels which did not discover the outer part of the reef in time.

The island when first visited, in November 1843 was literally covered with guano, that article being highest at the north end and gradually declining towards the south end. The guano in the northern pits, soon after they were commenced, measured about 40 feet in depth, decreasing gradually to about 10 feet at the south end of the island. From data which cannot be very incorrect, the whole quantity of guano removed from the island was about 200,000 tons. The guano on the island was

* As, however, Captain Owen's positions of this coast are all about 5′ too much westerly, this must be allowed in ascertaining the correct longitude.

of very different quality, the best being decidedly in the northern pits. The north-west corner contained a considerable quantity, the produce of the gannet and cormorant; the southern end partook very much of the nature of the Possession Island guano, and apparently from the same cause, viz., decayed seals as well as their droppings. The vast body however of the guano was undoubtedly the produce of the penguin, about one half, it is believed being the droppings of that bird, and the other, their decayed bodies.

This opinion is not given without due consideration, and from long observing the quantities of undecayed organic remains of the birds, particularly the skinny parts of the flipper or arm. The primitive granite rock which every where forms the surface on which the guano is deposited, rises highest on the south-east side of the island, being lowest at the north end. The north end from the prevailing southerly winds is the lee end, which by the birds resorting there for shelter may account for the greatest height of the guano at that end. The highest part of the rocky surface of Ichabo is about thirty feet above the level of high water.

The penguin found on this coast, is the small, or jackass penguin. November and December is the period of their incubation. On first landing in November 1843 the island was literally alive with one mass of penguins, who were so tame, or rather unaccustomed to man's appearance, that they would not move without the use of force. Thousands of eggs were collected by the sailors, and formed a savoury addition to their usual rations of salt meat. The penguin appears generally to lay two eggs, and during incubation the male and female regularly relieve each other in covering the eggs, in order that each may proceed to the sea in turn to procure their fishy food. Their nests are simply holes scraped out amongst the guano by their flippers, and the eggs require to be constantly covered from the attack of the gannets, who like so many pirates, keep hovering over the island on the wing, darting down on the egg of the unfortunate penguin if for an instant uncovered. It is a most amusing sight to see these strange birds, marching off in bodies to the sea, erect on their legs, like so many diminutive human beings. While floating on the surface of the water they do not swim fast, having only the use of their feet, but when underneath the water they swim with an amazing swiftness assisted by their flippers. They utter a cry which has a faint resemblance to the braying of a donkey, hence it is supposed they derive their name. When the cry meets the ear, however, during the night when sailing along the coast, it has more resemblance to the wailing of a child; hence the Spanish designation Pajaro niño.

On the whole length of this coast, the prevailing local wind, extending from sixty to 200 miles from the shore, is from S.b.W. to S.W.b.S. The wind which at the Cape, from the peculiar formation of the mountains on either side of the Cape flats, rushes through from the south-east, instantly takes the direction of the line of coast, and no south-east wind of any continuance is ever met with. This south wind blows constantly nine months in the year, varying in strength from No. 4 to 9; during the other three months in the winter season it is often calm, or light breezes from the N.N.W., from No. 1 to 4. Once or twice during two years the wind came from east, off the land, when the whole atmosphere seemed changed, an insufferable hot air and parched feeling accompanied

by shortness of breath being prevalent. The northerly winds were generally accompanied with dense fogs, containing a considerable quantity of moisture; during the southerly winds the sky overhead was clear and mostly without a cloud, the horizon however and a space of 15 to 20 degrees above it, was enveloped in a deep haze, causing the land from seaward to be completely undiscovered, and rendering an approach to the coast very dangerous and difficult, the sound and sight of the surf being generally the first announcement of a vessels proximity. At all times, but more particularly during the continuance of these southerly winds, the temperature was very low, a keen cold feeling predominant. Thick woollen clothing was always necessary, and the keenness of the winds caused a constant peeling off of the skin of the face, and for some time a festering and soreness of the lips. The temperature never varied much, averaging during the year, in the shade from 50° to 60°; when calm and unclouded, the sun sometimes was powerful, and on shore, at some distance from the coast, it was inconveniently warm.

The whole space between Ichabo and the main, formed the anchorage for the numerous fleet assembled in 1844, the depth of water varying from three to nine fathoms. The bottom throughout is rocky and uneven, covered with kelp; the holding for anchors was, therefore, bad, and it required both anchors, and a very great scope of chain out, to enable vessels to hold in the strong southerly winds. During these winds, the anchors of course came ahead, and the vessels generally riding to them, with a long scope of cable, when a light northerly air of wind caused the vessels to swing; before the chains could be hove in, or the ropes got out to steady the vessels, they came in contact, and, from the constant swell, much damage was done. In one night, during the month of October, 1844, from the above cause, fourteen vessels lost bowsprits, one or two lost mizen-masts, one sunk at her anchors, and two were so much damaged as to render their condemnation necessary. A very great number of anchors and chains were at various times lost, principally from the forelocks and pins coming out; this was by some attributed to some sort of quality in the water, causing oxidation in an extraordinary degree, and thus loosening them. It is, however, much more probable that the loss arose from the forelocks breaking, and pins working out, from the constant friction of the chains against the rocky bottom. No instance was known of a chain coming unshackled when the pins were made of wood well put in. The rise and fall at spring tides is about six feet.

The proper entrance into Ichabo anchorage is from the southward, as may be seen from the chart; the southern entrance is wide, free from danger, and has plenty of water. The northern entrance has, on the contrary, a very narrow channel, with water sufficient for deeply loaded vessels; many vessels struck in going out, and all over the northern part of the anchorage, rocks were discovered by vessels occasionally striking on them.

Fish were not so plentiful here as might have been supposed; a few cape salmon and rock-fish were occasionally caught; cray fish were in great abundance, but very coarse. With the exception of large coarse muscles and limpets, there were no shell fish to be found.

The rollers, so often described by parties visiting St. Helena and

Ascension, were also met with here; no satisfactory reason has yet been adduced for their production. They often came in at Ichabo in a calm; one fine afternoon, when the water was quite smooth and the boats busily loading at the stages, a heavy sea came rolling in, in a few minutes swamping six boats, and very much bruising and injuring several of their crews. They were generally felt at full or change of the moon, and formed an awfully grand spectacle, one huge mountain of water rolling in after another, the top broken into a white boiling mass of water, (the height it is supposed, from the top to the bottom, from twenty to thirty feet,) sweeping every thing before it until it met the beach, when it expended its fury, with a noise like thunder, rolling over many a fathom of sand or rock not at other times covered. The rollers were always heaviest across the northern entrance to the anchorage, where the water was shallow. Many vessels, which anchored too far to the northward and within their influence, were seriously damaged, and one, the Guernsey Lily, unfortunately driven on shore, when loaded and ready for sea. During the time the rollers were in, there was no change perceptible in the barometer, or any unusual appearance of the sky, a heavy, thick, and almost impervious haze generally hanging over the horizon.

On all this coast, from the Orange River to Walwich Bay, there is almost no vegetation; here and there at intervals are found some stunted bushes about two feet high, one or two kinds of gum plant, and a few geraniums, all of them of a sickly greyish green colour, these with a few sorts of wiry grass or rather bent, growing amongst the sand, being the only plants found.

There are few wild animals on all this coast. After having been considerable distances along shore, and visited many different parts of the coast, although we have heard many stories told of animals of a large size having been seen, it is quite certain, from personal observation, as well as the evidence of the Hottentots, that there are none of any consequence. Two foxes, or an animal exactly similar, have been seen; wild dogs are very numerous, in appearance exactly similar to a jackall; in a valley, or rather hollow, between two ranges of sand hills, about eight miles from Ichabo, where the Hottentots reside, there are a few hares, and one or two jackalls seen near the mouth of the Orange River, complete the list of animals found on the coast. Morrell's stories about wild animals, and trading for skins, ostrich feathers, and a long list of other things, may relate to the interior, about two hundred miles from the sea coast, where, it is understood, they are plentiful, as well as vegetation, cattle, and inhabitants. His fanciful scheme of salting beef, really creates an idea in a person's mind that he must in his dreams have imagined such a thing possible. There is plenty of a coarse common salt on the coast, (*now called Nitrate of Soda!*) but how the bullocks were to be driven for two hundred miles, over a country without water or vegetation, and arrive in a fit condition for killing, requires explanation.

The only inhabitants seen on the coast, were a few wandering families of Namaquas, whose principal residence was in the hollow before mentioned, about eight miles to the southward of Ichabo, and about two miles from the beach. There is abundance of brackish water there,

readily obtained by digging a hole in the sand about two feet deep; it is not fit, however, to be used by Europeans, and does not seem at all relished even by the Hottentots, when they could by any chance procure fresh water from the vessels. Captain Broke, of the *Thunderbolt*, caused the engineers of that vessel to sink several wells on the main land, opposite Ichabo, as well as at Angra Pequeña; water was always readily obtained, but quite salt and unfit for use, even the Hottentots would not taste it. They always pointed in a south-east direction, when enquiry was made for good water, and used a very decided expression, respecting its being at a very great distance.

The Hottentots met with at Angra Pequeña, Hottentot Bay, and Ichabo, were part of the same few families residing near the latter place. When they came to either of the former places, on a visit to the vessels, they soon made their arrangement for passing the night. Pulling up a few stunted bushes, they placed them one above another until they were about two feet from the ground, placed them in a semi-circular form, the convex side being towards the S.S.W., whence came the cold wind, and having hollowed out the sand a little from the inside, made a fire just outside the open part of the rude shelter, and covering themselves with their skin Kaross, with their feet near the fire, seemed to fancy themselves quite comfortable. We must, however, observe after travelling with them on several occasions, we never could feel the comfort.

The Hottentots are a race of small people, seldom exceeding five feet three or four inches; they are thin, and attenuated, their skin, even in the younger ones, being shrivelled and rough; they have square countenances, high cheek bones, a flat nose deeply sunk within the facial line, small eyes not at all prominent, a large wide mouth, with the under lip generally thick; their teeth are dark, often decayed, and irregular; their heads are not all intellectual; their feet and hands, however, are small and beautifully formed.

When first met on the coast, they evidently had been in the habit of occasionally communicating with ships; they invariably possessed a steel, although they had no foreign weapons.

On first visiting them on shore, they received us with looks of the greatest apathy and indifference, evidently waiting for the first advances to be made; they were in a sitting posture; the weight of the thighs resting on the legs above the heel. It is somewhat singular that this is the manner and attitude in which a New Zealander invariably receives strangers, considering it a mark of respect towards them. On approaching, and shaking hands with them, they soon seemed at ease, quickly asking for water and tobacco. They had no weapons with them, having, as was afterwards discovered, hid them amongst the rocks; they always have a great number of dogs. Their women never appeared, and during all our intercourse with them, they were rarely seen; whether this proceeded from a natural timidity, or arose from former ill-treatment it was difficult to determine; it is, however, believed to have been from the latter cause. They seem to be capable of taking in at once a week's provision. When first met with, two of them brought to the vessel, certainly seemed as if it was impossible to satisfy them with food; and the complacency with which they patted their stomachs, extended in a most extraordinary manner, shewed how much they seemed to enjoy their feed.

They were very fond of smoking, and often asked for tobacco. When first met with, they used a wiry sort of grass, but invariably preferred tobacco.

Having one day, when two of the men were on board, observed some others amongst the rocks at some distance inland, and supposing them to be women, who, at this time had not been seen, the men were accompanied on shore, from which they did not seem inclined to start. On walking about, however, the recent foot print of a child was discovered, which, when pointed out to them, seemed to agitate them considerably; determined, if possible, to see their dwelling, the foot prints were followed, the natives also coming, but evidently displeased. About one mile from the beach, two rude huts were seen, such as formerly described, with all their weapons, and property; the women and children, however, were gone, which seemed as much to astonish the natives, as to disappoint us. One of them ran at once to the place where the fire had been, pushed his hand amongst the ashes, and feeling no heat, seemed at once overwhelmed by passion, and disappointment. After many apparently violent expressions and gestures, he quietly sat down, filled his pipe with a wiry looking dried grass from a skin bag suspended from his neck, and smoking a few seconds became quite excited, presenting exactly the same appearance as an opium smoker; after the excitement, his eyes, at first rolling about like those of a maniac, became fixed, and he tumbled over on the ground, lying for some time as if dead.

Their language is exactly similar in sound to the Chinese, being produced by the same clacking sound of the tongue against the roof of the mouth. They, in their constant intercourse with the crews of the vessels, during two years, did not make much progress in acquiring English. One rather intelligent fellow, who went by the English cognomen of Pease-soup, was most easily understood by words, signs, and expression; but they are certainly as much behind the South Sea islanders in mental as in physical qualifications. This same Pease-soup was the musician of the party, having an instrument composed of a piece of wood about three feet long, a piece of sinew string, going from one end to the other, having near one end a piece of nicely scraped sinew about a quarter of an inch broad. This string being tightened to the proper tension, he applied his lips to the piece of sinew, and apparently with considerable exertion produced a few notes similar to the low notes of the French Horn. When listening to the music on board, he seemed much delighted, and on one of the sailors commencing to dance a hornpipe, he immediately joined, and kept most excellent time.

Their clothing consists simply of a skin mantle, composed of the skins of various wild animals, it is tied around the neck, and hangs loosely over the shoulders. They have invariably a piece of skin about a foot square, suspended by a string tied round the loins. They generally had a sort of skull cap of skin, on their heads, which have only a little woolly hair. At times when prepared for a journey they have a sort of mocassin or skin boot.

Their weapons are bows and arrows, and spears. The bow is made of wood, about four feet in length, the arrow is of bamboo, feathered at the inner end, at the outer end a piece of sharpened bone fits into the bamboo, one end of the bone being clear, the other poisoned, with a black pitchy looking substance. Their quiver generally contained about forty to fifty

arrows. Their spear is about seven feet long, the handle made of a piece of wood, the head invariably of steel, of native workmanship. They possess considerable dexterity in the use of these weapons; when asked where they get them, they invariably replied a long way off, where there were plenty of people. They carry their supply of water in ostrich eggs, having a small hole in one end. They had also a supply of a red ochre looking substance, with which, and grease they occasionally smeared their bodies; they are extremely filthy in their persons, never washing their bodies. They seem to trust on the coast entirely to supplies derived from it, young seals, birds, and shell-fish being the only food they seemed to use; they are no doubt induced to live on the coast from the chance of meeting with vessels. However often they were clothed from the vessels, they always appeared the following day in the kaross, and must have hid the clothes away, perhaps for the purpose of carrying with them when they rejoin their tribe. Three or four of them went away to the interior, travelling to the south-eastward, and returned after an absence of about four months. They had then with them a few roots, the remains of what they appeared to have subsisted on on the journey, something similar in appearance to the mandioca root.

The Hottentots do not appear to have any religion, at least no observances of any were ever noticed among them; their ideas on the subject could not be ascertained from a want of the requisite knowledge of their language.

They are extremely quiet, and respectful in their demeanour, never attempting to touch or take anything not given to them. No instance of dishonesty was known on the part of any of them, and when hungry and thirsty, they have never made the least attempt to assist themselves, until asked, although the table was covered with food before them. On shewing Pease-soup over the *Thunderbolt* steamer, he seemed highly delighted with every thing, particularly the pictures, looking glasses, and various native weapons in Captain Broke's cabin. On being taken into the engine-room however, the sight seemed completely to astonish him; he gave a long peculiar whistle, gazing on the machinery for some minutes without speaking.

Hottentot Bay about fifteen miles to the north of Ichabo, is spacious and well sheltered from the prevailing southerly winds. It has a moderate depth of water gradually shallowing towards the shores; the bottom is a mixture of clay and sand, and most excellent holding ground; a vessel might be hove down here in the summer season with ease. Many people were under the impression that this bay contained a large island having plenty of guano. This was boldly asserted on the coast after it had been repeatedly visited; there is a small rock in the south-west corner, but no guano on it.

Mercury Island, and Spencer Bay, are well laid down in the Admiralty chart. The anchorage is unsafe with strong southerly winds, having rocky bottom and no shelter from the sea. About 1500 tons of guano of an indifferent quality was removed from Mercury Island. The highest part of this island, which is about two hundrd feet above the level of the sea, is completely hollow, forming an immense cavern, into which the sea breaks through five entrances, in a most picturesque manner.

Hollams Bird Island, between Mercury Island and Walwich Bay, and

about nine miles from the mainland, is a small rocky island, having very indifferent anchorage off its north end. The sea is generally heavy all around it, and renders landing at all times difficult, and often dangerous. Notwithstanding the difficulties, a few hundred tons of guano of a very bad quality, which was in a gully, between the rocks, have been removed. From a small rock in Sandwich harbour, a few tons of guano were removed, of indifferent quality. This arm of the sea cannot be entered by vessels, being nearly dry at its entrance.

No guano has been found on any islands to the northward, neither is it believed, from a very minute search, that any exists. The various stories which were told about islands covered with it are mere fabrications. About 3000 tons of inferior guano have been removed from Seal Island in False Bay, under Government superintendance. It is ascertained also that about the same quantity exists on Dyer Islands, near Cape Agulhas, also belonging to Government. They have also made arrangements with M. Smith, the lessee of the Bird Islands in Algoa Bay, by which the Government are now to superintend the loading of the guano on these islands. It amounts to about 60,000 tons, very wet, and of indifferent quality; however no doubt it will soon be removed, and it is not believed, that any other guano in any quantity exists on any part of the African coast.

On all this coast from Orange River to Walwich Bay, it never rains, only three showers, accompanied by a little thunder, and lightning, having fallen during two years. The dews during the night are very heavy, and during the thick fogs which prevailed in the winter season, every thing became quite wet, water dropping from the rigging frequently. In Saldanha Bay very little rain falls, that little being during a few weeks in the winter months; even then the rain continues perhaps for twelve hours, and is succeeded by a bright sunshine.

THE AFRICAN GUANO TRADE.

Part III.

It will be apparent to any one, who has given the matter the slightest consideration, that the circumstances under which the parties who went to Ichabo, for the purpose of loading guano were placed, were certainly without any precedent, going to a barren uninhabited island, on an equally barren and it may be said uninhabited coast,(the few wandering families found on the coast cannot be deemed its inhabitants.) The island and whatever it contained being claimed by no nation, the termination of the Cape colony being the Orange River on the one side, and the Portuguese boundary being strictly limited by treaty to the eighteenth degree of south latitude on the other, the parties had an undeniable right to take possession, and to retain it. In December 1843 all parties then present, forwarded to the Home Government a representation of the quantity of guano on Ichabo, its value and importance to the country, with a request that the Government would be pleased to take possession of it, and send out the requisite authorities to superintend the shipment of the guano. To this document, no answer was ever received, nor was any notice taken of it, and it is now apparent, that the Government acted most judiciously in not taking possession of Ichabo, a measure which would have given other nations, an opportunity they would gladly have used, to point out the grasping nature of our Government, and perhaps have led to difficulties and negotiations, about a rock, now again valueless ; so far as the formal possession, taken by private individuals, could render Ichabo, British property, it was so, and the Union Jack continued to fly over the guano until its removal.

It will not be denied that a number of British subjects met together, on this island, now, certainly, if not *their* property, belonging to no *other party*, and in their occupancy, have an undoubted right, to form rules and regulations for their own Government. This was done as has already been pointed out, and the recognition of those rules and regulations by the British Admiral, commanding at the nearest naval station, gave them additional value and importance. It will also be apparent to any one, who gives the peculiarity of the case the slightest consideration, that from the very commencement, some system of working the guano must have been pursued. It could never for a moment be imagined, that parties would work, wherever fancy or caprice might dictate, and no other system could have been adopted, than the one pursued, of the working *frontage* being divided into sections or pits. At the commencement,

each party took, and marked off, such a portion of this as he could fully occupy with the working hands at his command. The portion or pits so marked off, and afterwards measured, and laid out on a plan, were transferred from one master of a vessel to another, as they arrived, at first, forms consideration, but shortly after the commencement, as vessels began to increase in numbers, a consideration was given at first, consisting of labour, for the filling and boating off of so many bags of guano, according to agreement, and afterwards as vessels continued increasing, consisting of labour and money.

Some of the parties who first came to the island, remained and worked their pits, solely in loading their chartered vessels agreed with in England, and coming out on the faith of the parties retaining these loading places. The principal parties who were at one time complained of, as monopolists, as has been already observed, *never sold either pits or guano*, but used their places, solely for loading the vessels coming out to them from England, and there chartered; but it must be admitted that there were others, who retained possession of pits for the purpose of disposing of cargoes of guano to the vessels arriving. Many masters of vessels, and super-cargoes remained at Ichabo for this purpose, and although for months after the trade was opened, the sums charged were moderate, and not more than a sufficient remuneration for the hire of the stages, which were very expensive, and liable to be destroyed, still, as vessels increased in numbers so very fast, the sums charged increased in proportion, and latterly when there was a doubt as to cargoes being obtained at all, almost any sum was promised, and bills given for the amount. This system of middle men as they may be termed, became therefore in some measure disagreeable to the parties arriving, who never seemed to consider, that the pits if not in the possession of those parties, would have been possessed by *masters of vessels who invariably charged just as much for a succession to the pit, as any of the permanent residents.* It was supposed in England, that all the pits were occupied by parties residing at Ichabo. This was decidely incorrect, at least two-thirds of the whole number of pits, being occupied by individual shipmasters, and by them transferred for sums of money, and labour, to other shipmasters arriving. Many shipmasters so occupying pits, detained their own vessels, working slowly, and in some instances not working at all, while they sold many successive cargoes of guano to other parties. It must not, therefore, be supposed, that the agents as they were termed, or the permanent residents were the parties who charged for guano, it was most assuredly mostly the shipmasters themselves. So quietly however were all these transactions arranged, that very few instances of these bargains, were ever exposed to the Committee.

It has already been stated that some parties who were most exclaimed against as monopolists, were the only parties occupying their pits, for their own vessels agreed for and chartered in England, not for the purposes of selling guano, but in strict conformity with the rules and regulations. Neither did these parties ever retain their pits unoccupied as was alleged, waiting for chartered vessels, no complaint ever having been made to the Committee during its existence of their pits not being fully occupied. Why then were they so much complained of? Simply and solely from envy at the prominent position they were placed in, in the

superintendance of affairs at the island, as well as at the quantity of guano they removed through their better arranged and concerted plans, all definitely fixed before they left England. It must, therefore, be always remembered, that the system of high charging for cargoes was never introduced by agents, but by the shipmasters themselves, or such of them as afterwards called themselves agents, when they deserted their vessels for the purpose of remaining behind to make money for themselves.

Most men who came to Ichabo, arrived with an idea that all the parties residing there, were little other than plunderers, and that the Committee was kept up only to suit their own purposes. Many respectable men, have informed us that they came there, under such impressions, but invariably such thinking, honest, educated men after seeing the working of things for a few days, became satified that they had been most grossly deceived, and as in most cases it turned out, had been deceived, by the most worthless class who had been at Ichabo, and who in consequence of misconduct, had been before the Committee for examination, and very likely reproof. As a proof that such was the feeling, many of the most respectable members of the Committee, men well known to the mercantile world at home, were parties in command of vessels, chartered in England and having an agent, or super-cargo, to procure their cargo, *who had therefore no interest or motive whatever, other than the simple wish to assist in conducting the public business and in preserving order and regularity amongst a class of men, many of whom certainly did all they could to create disturbance.* It would be difficult to point out any system of conducting affairs, under similar circumstances, which would have suited so well as the one pursued at Ichabo, and, it must with truth be asserted, that most of the few evils attached to the system, were generated and fostered, by the very parties who complained loudest.

The labours of the Committee were at all times arduous, and ungratifying in the extreme, particularly from the end of August to the middle of February, during which time there were generally about six thousand labourers and seamen present. These latter class of men, at all times difficult to manage, became still more so when engaged in an occupation so different to their general habits. The class of masters of vessels also, who came to Ichabo, were, it is sincerely hoped, not a fair specimen of the commanders of our merchantmen. Many of those coming out latterly, had been mates and second mates on a previous voyage, and all such, having been once at Ichabo, were considered peculiarly eligible by shipowners to command vessels bound to that place. The many cases of misconduct, particularly drunkenness, which came before the Committee, proved to all who were cognizant of the proceedings, how very incompetent many such men were, and the records of the Committee will show occurrences on board some vessels which could scarcely be credited of civilized people. Letters of complaint from many masters were sent to the Committee, which were scarcely legible, and the expressions they contained so truly incoherent and ridiculous, that the Secretary in reading them before the Committee, was often obliged to remain satisfied with giving what he considered to be the writer's meaning, it being utterly impossible to read every word, or understand every expression. Let not this be deemed too strong an expression of what was the truth, respecting the parties

in question, or too general in respect to the number of such parties; there were many highly respectable and well-conducted men at Ichabo in command of vessels, men who are an honour to the merchant service; it is only to be lamented that they were so rare. With such men and masters to deal with, so many conflicting interests to reconcile, so many tedious cases to examine, so many really trifling and frivolous complaints to listen to, which should never have come before them, the labours of the Committee were very onerous, and often very disagreeable. From August, 1844, to February, 1845, no Member of Committee ever could command a single day for his own purposes, so great was the demand for his services on public business, except it was a day when it was blowing so hard as to prevent boats pulling from ship to ship. General committee meetings, deputations, surveys, and other duties, completely occupied the time, and the official members particularly, had an amount of labour to perform little understood except by parties who were present. Many of the details elicited in the examinations of witnesses, in the enquiry made into many cases of complaint, were disagreeable and disgusting; conduct was exhibited on the part of masters, shameful in the highest degree, and it must be admitted that the Committee had more trouble with the masters than with the men. It is impossible that any court or jury could have given a greater degree of attention to cases coming before them, than they did; cases were always decided on their merits, and whatever the award might be it was always as lenient as possible. When parties were refractory and refused either to attend the Committee when summoned, or abide by its award when given, a written statement to that effect was sent to the senior naval officer present, who sent a marine guard on board the vessel, to prevent any more guano being loaded, until the master complied with the rules and regulations.

In all awards made by the Committee respecting either men or masters, the Senior naval officer present, (who of course attended the committe meeting, and was cognizant of such award,) carried the same into effect, whether it was simply a reprimand to the master, or forwarding to Lloyd's copies of the complaint and award respecting men, or removing a master from command of his vessel. He invariably carried into operation the Committee decisions, so long as he considered them just; and only in one or two instances were any decisions of the Committee objected to, and then on account of their leniency to the party complained of.

In managing so many men, much circumspection was required. The Committee were always the few, amongst the many, but so firmly did they do their duty, and so much respect did they gain by their patient attention to all complaints, whether from master or man, and their conscientious and just decisions, that the men, both labourers and seamen possessed as wholesome a dread of being brought before the Committee, as they would at home, of being taken before a magistrate. At the same time parties complaining did so, with a certainty that justice would be done between them, and the parties complained of.

It was extremely fortunate for all parties concerned in the trade at Ichabo, that a naval officer, possessing the experience, standing in the service, intimate acquaintance with the merchant service, and no dread

of responsibility, which Sir John Marshall had, came there at the time he did. There were many parties who fancied they knew something, who from an innate love of disorder and mischief, would have been very happy to have created disturbances on the island. Some of these parties even went so far as to say that, although Sir John Marshall might carry out the Committee's measures afloat, he could not interfere on shore, and went and lived on the island with the intention of making mischief. Sir John at once issued a notice, that all persons at and in Ichabo either did belong, or ought to belong, to some vessel, as no master of a vessel could at any time leave any person behind on a barren island, without the consent of the authorities, in terms of a well-known law,—that such consent never having been given, he considered them all as in vessels on the high seas; and having jurisdiction there over all British subjects, by virtue of his command, he was determined to carry out all measures of the Committe against any person present, so long as he deemed them just. This prompt and decided determination completely quelled a spirit which would soon have proceeded to open measures of revolt, had an officer been present who perhaps might have been afraid of incurring responsibility.

It is very much to be regretted, that naval officers have not power given them to enquire into and settle disputes occuring on board merchant vessels, wherever they meet with them. They are, undoubtedly, much more competent to do so, than any consul, or magistrate, who cannot appreciate or understand the relation between master and seaman afloat. Yet it is most singular, that in the new Act of Parliament, coming into operation in January, 1845, while Consuls, and Collectors of Customs, are mentioned, Naval Officers are not even alluded to, except as being empowered to muster the crews of merchant vessels. They should, undoubtedly, have full power and authority given them to enquire into and settle all disputes coming before them, respecting the merchant service, and those belonging to it; and not be left as they are at present, when appealed to, utterly unable to interfere, except by incurring a great responsibility. Circumstances at Ichabo, as well as at China, and many other places, where masters of merchantmen have been assembled, have amply proved the want of this amendment. It is very well known that all naval officers, being commissioned officers, and in command, have been deemed, and have deemed themselves magistrates; but we suspect they have no authority [illegible] beyond custom; if so, legal [illegible] given to them.

In the absence, as we have [illegible] part of the captains of men-[illegible] discipline, or rather, order and [illegible] reply, solely by great tact, discre[illegible] the naval officers, and [illegible] rious minor punish[illegible] which, from obser[illegible] resorted to, until [illegible] punishments, were [illegible] responsibility, as the [illegible] any way to interfere; [illegible]

whether their assumed authority, as magistrates, on the high seas, proceeds from any regular law to that effect. The naval officers commanding the respective vessels, were sent to Ichabo, to support the Committee and preserve order and regulation amongst the crews of the various vessels assembled. But how? That could not be answered, either by themselves, or the commander-in-chief, who sent them. Supposing an officer in command of one of the vessels, had come to Ichabo, afraid of incurring responsibility, and, on being applied to, by some masters of merchantmen to quell disturbance amongst their crews, had replied "I have no authority or right to interfere." (Neither has he by law.) What would have been the consequence, when such refusal was made known to the crews of the other vessels? In all probability, a state of general anarchy and confusion, and farther, most probably, a scene of bloodshed, frightful to contemplate.

For a naval officer to be sent on such a duty at all, as the general superintendance of such a number of men as were at Ichabo, is most irksome and disagreeable; but becomes infinitely more so, when he finds himself without power, unless he incurs a responsibility, for a service he is not connected with, which he is not required to do in his own. When it was resolved to clear the island of Ichabo of all the tents, a measure not at all popular amongst the men, as it curtailed their irregularities, but positively requisite for the maintenance of order amongst them; when Sir John Marshall landed with, perhaps, 200 men, fully armed, to drive off between 2000 and 3000, what must have been his feelings? The least resistance, and consequent use of coercion, might have induced a general commotion. One blow struck, many would have followed, and many a life have been sacrificed. This is no ideal view of the matter, but was stern reality. We who were present, and I may venture to say, Sir John Marshall himself, trembled for the consequences.

In the same manner, when the attack was at a later period made on the pits, and the marines and sailors of the *Thunderbolt*, went on shore armed, to quell the disturbance, and clear the island; the smallness of the force produced no moral effect, and, as many of the men were excited by grog, we every moment expected a collision, and consequent sacrifice of life; and shall long remember with most grateful feelings, the moderation and forbearance of the marines in doing their duty. What we would ask could have been Commander Broke's feelings at the moment? Before him, the prospect of a loss of life, by a use of force under his command, but authorized by no law. It is the height of injustice to naval officers, I again repeat, to ask them to incur such fearful responsibility. Let the maritime law at once constitute them magistrates, empower them to act, in all cases under the Act, and in any extraordinary circumstances, give them authority to act in the same manner as on board their own vessels. It was only by assuming a power they have not, and incurring a responsibility they ought not to be subject to, coupled with their own firmness and attention to business at Ichabo, that enabled order to be maintained. It may be said, that such a number of vessels, may never again be assembled together, as were met at Ichabo, and that consequently the same necessity may not exist for any extension of a naval officer's authority. We, however, reply that such a necessity existed in China during the late war; it existed in the Gulf of Mexico

during the French blockade; in the River Plate, during the recent disturbances; and will again exist wherever our merchantmen are through any stoppage in trade, detained at any particular place. Moreover, whether individually or collectively, whenever it is necessary for masters of merchantmen to call in the assistance of the naval power of their country, it is necessary the officers of that power should have authority to act. When a riot occurs on shore, either in Great Britain, or her colonies, and the magistrate finds the civil power insufficient to quell the disturbance, he at once reads the riot act, calls in the aid of the military, and in a manner authorized by the laws of his country, restores tranquillity. Why should not naval officers commanding vessels, and being naval magistrates, on being called on to quell a disturbance amongst seamen, be empowered to act in the same manner? How very satisfactory it would have been to both Sir John Marshall and Commander Broke, to have been possessed of the power on the occasion above alluded to, and how very necessary that they should have been.

We strongly suspect, that commanding officers of men-of-war are encouraged by the Admiralty, not to interfere in coercing merchant seamen to do their duty, on board their own vessels, from a dread that it may give them a dislike to entering the navy. If such be the case, we must say, from considerable experience, it is most mistaken policy. The nearer that the discipline of the two services can be assimilated the more readily will the seaman join a vessel of war in preference to a merchantman. How often have we heard the man-of-war's man say, why I only ran from such a vessel, and joined the merchant service to have a spree, and liberty to do as I like. Was the discipline of the two services as nearly as possible assimilated, what seaman in his senses would prefer the miserable, dark, damp, unwholesome hole he must live in on board a merchantman, to the clean, well aired, comfortable berth-deck, of a man-of-war; the greater labour, and fewer hands of the former, to the comparative ease of the latter; the wholesome food, and comfortable clothing of the one, to the often decayed provisions, and whatever clothing his dissipation on shore may have left him, of the other. Why is it however, that the seamen of the navy are protected, as regards their health, cleanliness, and comfort, by positive orders issued from the Admiralty, and rigidly enforced? And why should legislation not do the same, for the merchant seamen? Is his life less valuable to his country or less worthy of the fostering care of his Government? The miserable dark, pestilential places of forecastles, where in a great majority of vessels the merchant seaman lives, are the generators of many fatal diseases, and the means of fostering many a simple complaint to fatality. We ourselves know from experience, that in many vessels the men are not only never encouraged, but never allowed time to clean out the forecastle, excepting they do it themselves in their watch below, and we have been in forecastles, that never were cleaned from the commencement, to the end of a voyage, of considerable length.

Let the Medical gentlemen of the vessels of war who were at Ichabo, or, Dr. McCosh, a highly respectable medical man, who practised at that place, state in what a miserable state they found the abode of the men when visiting them professionally. The latter gentleman in one case, when he was called upon by the naval officer present, to state the cause

of the death of a seaman on board a brig, gave a certificate stating, that it arose from want of proper food, and from living in an unhealthy, damp, and filthy forecastle.

We certainly think that the Merchant Seamen's Act should have stipulated, that all forecastles shall be thoroughly cleaned once every week, and the mens' bedding aired, and that the whole ceiling and roof of the forecastle should be either whitewashed with lime, or painted every three months. Another measure which would tend much to increase the room allowed to our seamen, and consequently have the forecastles better ventilated, would be, the deduction from the register tonnage of the vessel, of the number of tons measurement set apart in each vessel for the accommodation of the crew.

It seems also from the omission of the names of naval officers, as persons in authority, under the new Merchant Seamen's Act, that they are not required to pay any attention to it; yet who so competent as they, to see its enactments carried into execution, and its requirements attended to? Nay, although they are almost daily in contact with the merchant service, they are not even supplied with a copy of the Act itself. This appears almost incredible, yet it is true. Not only should all commanding officers of vessels of war be supplied with a copy of the Act by Government, but they should also be supplied with copies of the Registry Act, and all other acts relating to the Merchant Service. At present, when they require such works they must either buy them at their own cost, or borrow them from masters in the merchant service, and many of them may in consequence be met with, who scarcely know the requirements necessary to constitute a ship a British merchant vessel.

There is also in the new Merchant Seamen's Act an omission calculated greatly to inconvenience many men. No authority is given to Collectors of Customs or Governors in our colonies to grant Register Tickets. The consequence is, that many men, belonging to our colonies, and trading from them to foreign ports, but who never come to England, cannot now go in British vessels without coming to England, thereby sacrificing much time and injuring their family, who are dependant upon them for support. This might easily be amended by granting, under certain restrictions, power to Collectors of Customs, in the colonies, to grant tickets to seamen trading from these colonies.

The enactment No. 18 in this act, is liable to misinterpretation. We have already heard it construed in two different ways by magistrates in our colonies. This enactment states, that in case a master or seaman receiving any hurt or injury, in the service of the ship, the owner must maintain him, and pay his medical attendance, until he shall have been cured, or shall have been brought back to Great Britain. In the first place, does hurt or injury mean only wounds received, or arms or legs broken, in the service of the vessel? or does it mean, any disease by which a man may be attacked while in the service of the vessel (excepting of course a disease brought on by dissipation)? We are inclined to believe that the spirit of the Act means any disease, with the exception above named, as it certainly is apparent that a man suffering from scurvy, in consequence of bad provisions, ought to be attended to and maintained, or any man suffering from fever, or any other disease, con-

tracted, in all probability, from exposure in the service of the vessel; yet this important part of the Act is left open to dispute from a carelessness of expression.

In the next place, the enactment says, the owner shall maintain the seaman until he shall have been cured, *or* brought to England. Is the owner to choose according to this *or*, whether he will maintain the man till cured, or pay for his removal at once to England? Surely this never could be contemplated;—what then does the enactment mean?

This act, although a great improvement upon the former, is still very far wanting in many points. It is to be hoped that the Government will cause its enactments to be carried into operation, as it is notorious that the former act was never put in force, in any foreign port, as respects its stipulations being fulfilled. Unless Consuls, and Collectors of Customs, will strictly examine every vessel's articles, and fine the offending parties, the enactments of this act, like the former one, will soon become a dead letter. Many more stringent enactments are also required, and all the naval officers, who were at Ichabo, as well as the Committee, can give ample proof how much some system of examination of masters and officers is required.

Log Books, stamped and authorised, should be introduced; the log books, or apologies for them, kept in most vessels, being a disgrace to any country, containing no record of the weather, the vessel's daily position, or the operations on board, which can afford any information to the enquirer. It is earnestly hoped, that in any investigation respecting the British Merchant Service, which may come before a Committee of the House of Commons, they will examine the naval officers who were at Ichabo, particularly Sir John Marshall and Commander Broke, who as well as the official members of the Committee, could unfold a system of misrule, mismanagement, and misconduct which would scarcely be credited. But no, a barrier to all improvement in the Merchant Service is raised by shipowners on the one side, who fancy if the officers and masters were more respectable and better qualified men, they would require more pay, forgetting that the ill paid men, in general from misconduct when abroad, sacrifice fifty times the difference of pay; and by the underwriters on the other hand, who are afraid, that so soon as the safety of merchant vessels, is rendered more secure by an improvement in officers and masters, their occupation like Othello's would be gone.

While speaking of improvement in the Merchant Service, we would earnestly recommend to those philanthropic individuals who are exerting themselves in the sailors' cause, the present neglected state of the apprentices belonging to our merchantmen. Since the new act requires their names to be registered, and their tickets retained by their masters, there is now a much greater probability than there formerly was, that they will serve out the period of their engagements. While our large ports are crowded with vessels, having each from three to five apprentices belonging to them, while the great majority of these apprentices are from distant parts of the country, having no home in the seaports, during the vessels' stay in harbour, a period of from four to six weeks, they are left to find their way to any common boarding-house they may select, where they remain until the vessel goes to sea.

Any one who knows what these Sailors' boarding houses are, in our

seaports, the character of the people who keep them, and the nature of the society frequenting them, cannot be surprised at the poor ignorant boy, just ushered into such scenes, in some cases, from a quiet country life, where he had a happy, peaceful, and it may be religious home, soon becoming contaminated; and from experience we know, often ending in acquiring habits of intoxication, and debauchery, and this too, long before the term of his apprenticeship expires. This picture is not overdrawn, and no one in thinking of it, can be surprised at the general habits, and character of our merchant seamen. The great object then, is to provide a comfortable place to receive these apprentices on their arrival in Great Britain, where they would be comfortably fed, well treated, educated, and removed from contact with such society as would undoubtedly ruin them. For this purpose we think that hulks, or old vessels, should be fitted up to receive them, moored in the rivers, at the respective ports, placed under the command of old and respectable Master Mariners, and have a teacher attached to each. Government would in all probability, contribute some of the old men-of-war, admirably adapted for such a purpose. Three would be required for London, three for Liverpool, one for Bristol, one for Glasgow, one at Leith, and another at Greenock, while other ports having a sufficiency of shipping might follow the example. They should all be moored in the river, at such a distance from the shore as to prevent communication. In London and Liverpool, they would be placed in such situations opposite the respective docks, as would facilitate the getting on board quickly at meal times.

If the Government gave the vessels, which in all probability they would, the board wages of the boys, on an average nine shillings a week, would maintain the establishment. Subscriptions if necessary would most willingly be entered into, by many benevolent shipowners, libraries containing entertaining and amusing books might be attached to each vessel; a swimming bath might easily be made, promoting cleanliness and the acquirement of an accomplishment so necessary to a seaman. In the evenings all would attend school when the education would naturally be such as would tend to fit them for a nautical life. On Sundays they might either attend one of the Seamen's Chapels or have service on board. The system of management should not be ascetic or morose, but cheerful and lively, tending to keep them contented and amused with a due regard to morality and good behaviour. As riggers and lumpers are now employed on board vessels while in harbour, the boys might be spared for one day in each week, or more perhaps, when they might be taken to see Museums, Zoological Gardens, and such places as would tend to amuse and instruct at the same time. There can be no doubt that shipmasters and owners would give such a measure their support, and we are certain an incalculable benefit would be conferred on the Merchant Service by it.

The developement of the wealth to be obtained from Ichabo, the manner in which the guano was removed, the immense fleet of vessels and number of men employed, and the natural difficulties they had to contend with, must strike any observant person, as a most extraordinary occurrence. Through all the difficulties of the surf on the shore, washing down stages at intervals,—the wind and sea in the anchorage, rendering communication difficult, and boating off guano impossible,—the trade

was pursued and the removal of the guano completed in a very short space of time. The weather only permitted on an average three good boating days each week; on the other days it was generally impossible to land, when all hands were employed in digging, filling, and carrying down the bags to the ends of the respective stages ready for shipment. On one of the fine calm days, which sometimes succeeded a strong breeze, it was a most interesting sight to stand on the top of the island, and look on the busy scene below. The party might be seen in the pit, amidst clouds of dust, digging down the guano, another shovelling and filling it into bags. From another pit, the whole would be wheeling or carrying the bags down, while on every stage a continued string of men, were running along with a bag on their shoulders, tossing it into the boat at the stage end, and running along in return for another. Then again might be observed, the deeply laden boat being pulled off to the vessel, the men singing as they go and return, while the song of the portion of the crew on board heaving up the cargo, reached the ear in faint but well-known strains. On some of these fine days, which occurred, after bad weather, when all had been busy, filling and preparing, not less than 2000 tons have been removed during the day; generally speaking, the men worked well, and if at times, they were somewhat noisy, it could easily be tolerated, when the nature of the labour was considered. It was, in our opinion, a proud sight, for any subject of our country to contemplate the great assembled mass of shipping,—the energy and perseverance of the individuals,—the labour, and difficulties to be met by the many, to calculate the value of the shipping, the expense of their equipment, the worth of the homeward cargo, its importance as well in a mercantile, as in an agricultural point of view,—it was, we again aver, a stirring scene, and enough to render a man proud of his country.

What other nation in the world but our own could have accomplished it? What other could have displayed the same number of vessels? Or, what people evinced more energy and perseverance in the pursuit of an object under such difficulties? It was, we repeat a noble sight, one seldom before witnessed, and well calculated to make any one proud of his country and contented with his nationality. While two hundred thousand tons of guano were removed from the island, only eight small cargoes were obtained by foreign vessels; and of these eight only two were from the pits, the others coming too late, and of necessity picking up inferior quality when it could be obtained.

Much money will no doubt be lost in over-speculation, as since the proof of the quality and value of Ichabo guano, from being at first too sceptical, people became all at once too credulous, and no scheme appeared too foolish not to be attempted. Many vessels have sailed in quest of guano to places, where from the well known frequency and heaviness of the rains, guano cannot exist; others have come to the coast provided with mining tools and implements, in quest of anything from copper ore to gold dust, searching for what only existed in their own fevered imaginations.

Deposits of common salt, found all over the coast, and throughout the Cape Colony, have been converted into beds of nitrate of soda, the valuable secret, (as it has been termed,) with spurious samples, sold by intri-

guing adventurers, to credulous speculators; while, on tracing the whole mania to its source, it originated with a man devoid of any thing like information or character, and who never during the very short time he was on the coast looked for nitrate of soda in such a place as it possibly could from its nature be met with. The information given was a concoction from imagination, with a little of the veritable Morrell.

That nitrate of soda, and other valuables do not exist on this coast is not attempted to be proved, but that the parties who gave or rather sold the information, were entirely ignorant of it, is quite certain.

Many complaints, and false assertions have no doubt long ere this time been made by parties against the Committee and its proceedings, particularly by men who were sent out as agents for others at home, either owners or charterers of vessels, to procure for them cargoes of guano. Some of these parties have told their employers coolly, that they were prevented loading their vessels by some act of the Committee, when it can be proved that several of these parties sold cargo after cargo of guano, from pits occupied by them in their employers' name, while their own vessels remained empty, and the bills and money obtained in return, oftener, it is well understood, found their way to the pockets of the agent than the principal. It is to be hoped, that the non-payment of some of these bills, will lead to discovery. However, let no one believe what may be alleged against the Committee, until he learns the truth from some of its members ; and the public may rest assured that they are perfectly ready, and prepared, to justify on proper grounds, every recommendation they made, or action they did.

To recount many of the very extraordinary cases, which came before the Committee from time to time, would perhaps prove amusing, but they would at the same time prove such a state of things, existing in our Merchant Service, as could scarcely be credited, and would not be agreeable. We would, therefore, refer any one desirous of information on this point, to the Committee records, where ample information can be obtained.

It was most fortunate for the Committee as well as the Shipowners, and others interested in the guano trade, that Naval officers, such as Sir John Marshall and Captain Broke, came to remain at Ichabo. Harrassing and arduous as the nature of their duties were, they gave up their whole time and attention to the work. Their patient investigation of every case coming under their notice ; their kind and affable demeanour to all requiring their assistance; their uniform support to the Committee, and constant attendance at their meetings, often in bad weather and under circumstances of wind and sea which ensured a wetting,—are all worthy of the highest commendation. The uniform kind and attentive demeanour of these officers, often employed in the most disagreeable duties, their constant firmness and evenness of temper when assailed by language not always the most refined or elegant, entitle them to our warmest thanks. The boats of the *Isis* and *Thunderbolt* were constantly employed from morning to night, the duties of every one on board these vessels were increased, and the constant wettings, and destruction of clothing which both officers and men were continually meeting with, made their cheerful performance of their duties the more commendable.

An officer and party from the *Isis*, went down the coast in a pilot cutter, lent for the purpose by parties at Ichabo, (although uninsured, and containing valuable stores, without either remuneration or guarantee) and after great difficulty and danger (two of the *Isis's* seamen having been drowned) succeeded in saving the whole crew of the Orion, wrecked on the coast, while an officer and party from the *Thunderbolt* proceeded in the same cutter in search of another crew reported to be wrecked, and although it was proved that no vessel had been wrecked, still the fatigue and exertions of the party were not the less conspicuous.

Harrassing however, as was the nature of the duties imposed on the naval officers at Ichabo, it is hoped that they acquired much valuable information respecting the Merchant Service, which may prove of importance to them in their future professional career.

To the captains of Her Majesty's ships *Isis*, *Thunderbolt*, and *Clio*, as well as their respective officers, we ourselves are under great personal obligation, for much kindness and attention, and we shall often recur to many evenings spent in their most hospitable society, after the fatigues and disagreeables of the day were past, as the brightest spots in the remembrance of our residence in that "Terra incognita inhospitalis."

The following lines were written by a talented friend of ours at the Cape of Good Hope, at a time when the whole conversation in every society centered in Guano.

A thousand fine vessels are ploughing the main,
With their white sails all spread till their lofty spars strain;
But what are they seeking, and where are they gone?
Attend to my lay, and I'll tell you anon.

There's an island that lies on West Africa's shore,
Where penguins have lived since the flood or before,
And raised up a hill there, a mile high or more.
This hill is all guano, and lately 'tis shown,
That finer potatoes and turnips are grown
By means of this compost, than ever were known;
And the peach and the nectarine, the apple, the pear,
Attain such a size, that the gardeners stare,
And cry, "Well! I never saw fruit like that 'ere!"
One cabbage thus reared, as a paper maintains,
Weighed twenty-one stone, thirteen pounds and six grains,
So no wonder Guano celebrity gains.

If business cause you to walk down the street,
A group of old fogies you're certain to meet,
Rigged in chokers, frock-coats, and boots, all complete;
Except that the latter are large for the feet,
But that is apart from the subject I treat:

Their broad shouldered figures, their weather-bronzed features,
Convince you at once, that they're sea-faring creatures.
One pulls out a snuff-box and hands it about,
While each one in turn puts it up to his snout,
But none of the party will take a pinch out:
You're puzzled till some one says, "here' an example
Of Malagas Guano, it's not a bad sample."

You speak a strange sail, ask her where she is bound?
She answers, "wherever guano is found."

At dinner some gentlemen helping a dish
Says "a little guano, Sir?—beg pardon—fish?"
And so the word's dinned in your ears, till you wish,
Those foreseeing penguins had never laid by,
(Without speaking before) such a precious supply.

The island of Ichabo's besomed all o'er,
As clean as e'er thrasher swept granary floor:
Not Hercules self, as Augeas's groom,
E'er used with such rigour his scavenger broom.
It's now nothing more than a desolate rock,
And, sad to relate, such a terrible shock
Have the seals and the penguins to each finer feeling
Received, from, what they call scandalous dealing,
Their infants all strangled regardless of squealing,
That, to law and to gratitude vainly appealing,
In rage they've abandoned the home of their sires,
Protesting, henceforth 'till the whole tribe expires,
This coveted treasure they'll cast in the deep.
Each parent enjoins on his children to keep
The oaths they have sworn? Skippers listen and weep!

On Ichabo's surges deep wailings were heard,
The childless, the widow, the fatherless bird,
Departing in pitiful dirges concurred:
From Malaga's shores, too, a shriek rode the wind,
From bleak Paternoster another combined;
From I. O. Smith's islands a voice rent the air,
Prophetic that they in disasters would share,
Notwithstanding the good Capt. B———n had been there,
And done what he could do to ward off their fate;
His gen'rous exertions were rather too late,
His arguments lost on the merciless fate
Of one, who had bade them their doom to await.

One evening it chanced, as I strolled by the shore,
This saddest of ditties the cool night breeze bore,
Distinct o'er the surf with its gruff sullen roar;—

The Penguin's Lament.

Tormented for aye be the pitiless breast
That drove me afar from my home!
A desolate bird o'er the broad billow's crest,
In search of a country to roam.

Fiends, ever torture the cold ruthless heart
That robbed my warm nest of its young!
And made a poor heart-broken penguin depart
From the land whence his forefathers sprung.

May conscience's thorns on his death-bed be strewn,
His friends in adversity flee,
Was Martin's act made for the jack-ass alone!
Extend not its mercies to me?

Then in Albion! no longer the land of the just,
The penguin's lament shall be heard,
And those miserly wretches lie low in the dust,
Who spared not a poor ocean bird.

Captain B—— had proceeded to the Bird Islands from Liverpool to inspect the quality of the guano, and the facility for loading it, with a view to purchasing the lease, from the lessee, Mr. Smith; no doubt for politic reasons, Capt. B. neither approved of quality nor locality, and, therefore, is said to have done what he could to ward off the fate of the penguins.

The price of Guano at Ichabo varied according to the demand, at one time being 5s. per ton, and at another 15s. to 20s. per ton. The freights of such vessels as were chartered were £4 per ton. On an average the price of good guano received by the importers was £6 10s. to £7 10s. per ton. The farmer, however, never obtained it under £8, and then often adulterated by the holders.

HUNT, Printer, 3, New Church Street, Edgware Road

Hydrographical Notes on Dangers in the Sooloo and Celebes Seas and Strait of Macassar.—*By Mr. H. Martindale, Chief Officer of the Ship Sultana.*

Ship Sultana, Bombay Harbour.

Sir.—During two voyages from China towards Bombay by the passage through the Sooloo and Celebes Seas, and Strait of Macassar, during the months of June and July, having found the existing charts very defective as regards the position of the land, and Horsburgh giving a very vague description of the appearance of the coasts and islands I have a few observations to offer. If you deem them worthy of a place in your valuable and widely circulated periodical I should feel obliged by your inserting them as a guide to future Navigators.

We left Macao on the 3rd of June of the present year, and had a tedious passage down the China Sea, as we had light south-easterly winds, with a constant drain of current to the north-west, averaging 20′ a day, and in consequence did not make the land of Mindoro until the morning of the 25th. The current during the last 24 hours changed and ran to the N.E.b.E. 39′. During the four succeeding days we experienced a succession of violent squalls from the southward, veering at times to the S.S.E. and S.S.W. with a high short sea, torrents of rain, and very dirty weather, which prevented us from entering the Straits of Northumberland until the 29th, when the weather moderated and the wind veered to the northward and north-westward.

From good observations obtained on the 25th and 29th I make the whole of the western line of coast of Mindoro from Mount Calavite to Point Ylin, as also Busvagon and adjacent islands from 6′ to 9′ further west than laid down in Horsburgh's chart. We distinctly saw the breakers on the nine feet rock seen by the Chusan in 1842 in about lat. 12° 39′ 00″ N., long. 120° 14′ 00″ E. The coast of Mindoro from Point Calavite to Point Lamintao, is very high, much higher than any of the Calamianes islands, but from that point it decreases in height and terminates to the southward in Point Ylin, a long low point. Busvagon when first seen from the northward appears like a cluster of islands, but as you approach they are joined together by lower land. Turret Island is moderately high, and may be known by a remarkable pinnacle rock rising from the sea close to its north-west extreme. Coron is a high island of a more uniform height than any of the other Calamianes, and may in consequence be easily distinguished. Quiniluban is a high rugged island and has a remarkable spire peak on its western extreme. Paguayan much resembles Quiniluban in appearance, but is lower and smaller.

The late Captain Isaacson passing through in the Inglis in 1844 states that he saw an island not laid down in the charts, which he made in lat. 11° 48′ N., long. 121° 45′ E., and may be seen three or four leagues, from the deck of a large ship: and that the dry sand should be described as a low sandy isle much covered with trees and very picturesque.

The Grand Cuyos is much lower than any of the other islands of this group, and may be called a long low island, with a small peak in the centre, and a hill near its northern extreme: when seen from the eastward

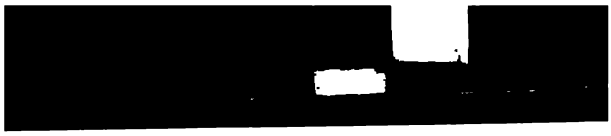
a stranger is very apt to take another large and high island for it which lies to the north-eastward.

On the 2nd July steering south with a light westerly wind observed the water suddenly become discoloured, and on looking over the side saw rocks underneath. Hauled up immediately S.S.W. the lead line being all ready passed along, hove and obtained soundings of 7 and 10 fathoms, and immediately afterwards deepened to no bottom at 50 fathoms. We again steered south. A Hamburgh vessel, Flora, in company, bearing south 3′. Shortly afterwards seeing the Flora tack suddenly and the water in her lee having a shoal appearance, we tacked and stood to the N.N.W. The cutter was then lowered and I went to examine the shoal and steering in an E.b.S. ½ S. direction, from no ground at 50 fathoms got the following soundings 11, 7, 5, 4, 3, 3, 3, and one cast of 1½ fathoms. I then steered E.b.S. and had several casts of 3 fathoms, afterwards north and got 3, 4, 5, 7, 10 fathoms, and immediately no bottom at 50. All the soundings were coral rock, and the water shoaled very rapidly. From its having been seen by both ships at such a distance from each other this dangerous shoal must be very extensive, and may even extend to the Cagayanes islands, which were in sight from aloft at the time. I take it to be the same shoal on which the Golconda and Munford struck. If so, it is misplaced, as the position assigned to it is lat. 10° 5′ N., long. 121° 50′ E., whereas both ourselves and the Flora made the position as follows: ship when in 7 fathoms lat. 9° 59′ 30″ N., long. 121° 23′ 36″ E., site of boat when in least water lat. 9° 58′ 45″ N., longitude 121° 23′ 56″ E. There is a rocky islet to the northward of the Cagayanes, not mentioned in the chart.

The coast of Mindanao is very high and may be seen at a distance of 50′. Soundings of 17½ fathoms were obtained in the western entrance of Basselan Straits with the following bearings: Teynga Island in one with the Sandboys S.W., Caldera Point E.b.S. ½ S., and there is an extensive patch of from 18 to 25 fathoms rotten red coral to the south-west of the Santa Cruz Island, western extreme of Basselan bearing from S.b.W. to S.S.W. ½ W., which would allow a ship to anchor if becalmed with a strong westerly current. We experienced a kind of tide hereabouts but very irregular and principally from the eastward. The reef off Santa Cruz Islands extends at least 4½ miles to the westward instead of 2′, (as the ship Good Success 1840 got into 4 fathoms with the following bearings: Smallest Santa Cruz Island E 4′, Sandboys W.b.S. western extreme of Mindanao N.W. northerly) and within 5′ miles of the Island Malvanan (a long low island fronting the north coast of Basselan) which is mentioned in the Spanish chart, although nameless in Horsburgh. As with that island bearing south 5′ we had a shoal cast of 7 fathoms on the edge of the reef; it is therefore more dangerous than generally supposed.

The coast of Basselan is not laid down correctly, particularly the south eastern part, which extends several miles further to the eastward.

After leaving the Sooloo Islands we experienced but little if any current, but while in their vicinity had variable currents from north-west and north-east averaging 15′ daily. There are three very conspicuous peaks on the island of Basselan which are useful in obtaining bearings as they may be seen from a considerable distance. Tapeantana



Island seen from the northward much resembles Pulo Tingy in the China Sea. Belawn is a long low island, and has a dome-like peak in the centre when seen from the south-east. Secassie is of moderate height apparently well cultivated; its highest and central part is covered by a remarkable clump of dark coloured trees forming a cap to the island when seen from the south-east. Pata is a high island having a peak on its eastern and western extremes when seen from the southward.

The land of Cape Rivers and indeed all the northern coast of Celebes, is very high and may be seen 90′ off. From Cape Tomoel to Cape William the land in the interior presents a succession of Table mountains and lofty peaks, and the line of coast is moderately high, forming many bays (some of them deep) with numerous bluff points, and thickly wooded throughout. Cape William itself is high and rugged, partly cultivated, and has many native huts on it. It may easily be known on approaching from the northward by a remarkable peaked hill, a little to the northward of it, near the coast higher than the surrounding hills. We found the coast to the northward of Cape Temoel laid down considerably to the westward of its true position; but from Temoel to Cape William it is placed too far to the eastward. Captain Isaacson made the same remark passing through in the Inglis in 1844.

The dry sand bank in the Strait of Macassar, marked doubtful, has existence. I saw it distinctly passing in the Fort William 1841. When it was perceived we were standing right on to it about 7′ distant, I made its position in latitude 3° 34′ 24″ S., long. 117° 39′ 12″ E., instead of lat. 3° 32′ 48″ S., long. 117° 47′ E., as marked in the chart.

In the following Table I have marked the true site of some of the points and headlands in the passage which I think may be depended upon, as on our arrival at Batavia, August 2nd, we took several sights, both before and after noon, for the chronometers, and found them correct.

It is to be hoped that ere long some measures will be taken to have this part of the Eastern Archipelago properly surveyed, as our rapidly increasing commercial intercourse with China will cause it to be much more frequented than it has hitherto been.

I am, &c.,

H. MARTINDALE,

To the Editor, &c. *Chief Officer.*

Table of corrected Latitudes and Longitudes of several places in the abovementioned passage.

Names of points, headlands, &c.	Latitude N.			Longitude E.		
	°	′	″	°	′	″
Western Coast of Mindoro from 6′ to 9′ to far East on Horsburgh's Chart						
Point Calavete	13	28	0	120	15	0
Mindoro { Point Ambolon ...	12	10	30	120	59	45
Mindoro { Point Ylin	12	07	0	121	06	15
North Rock off Busvagon	12	26	0	119	59	0
Turret Island	12	21	0	120	08	0
Grand Cayos { North end	10	51	30	121	15	0
Grand Cayos { South end	10	46	30	121	9	0

Names of points, headlands, &c.	Latitude N.			Longitude E.		
	°	′	″	°	′	″
Cagayanes — North end	9	42	30	121	21	0
Cagayanes — South end	9	35	30	121	16	0
Rocky Islet, not mentioned in chart ...	9	44	0	121	23	0
Ship when in 7 fathoms	9	59	30	121	23	36
Boat when in 1½ fathoms	9	58	45	121	23	56
Mindanao — Caldera Point ...	0	0	0	122	0	0
Mindanao — S.W. Point	0	0	0	121	56	0
Sangboys Islands, Sooloo Arch. ...	6	46	30	121	30	0
Bassalan Island — Peak, called Western Peak	0	0	0	121	54	0
Bassalan Island — Peak, called Eastern Peak	0	0	0	121	59	20
Bassalan Island — Western Point ...	0	0	0	121	54	10
Bassalan Island — Eastern Point... ...	6	34	40	122	26	50
Bassalan Island — S.E. Points	6	27	0	122	21	53
Manalippa Island, so named in Spanish chart	6	53	30	122	24	30
Coco or Manalippa Island	6	39	50	122	23	23
Sibagos — East Island	6	42	0	122	32	30
Sibagos — West Island	6	43	0	122	30	0
Soolo Archipelago — Belawn Island ...	6	6	0	122	15	0
Soolo Archipelago — Tapeantana	6	18	0	122	11	30
Soolo Archipelago — Kabingan	0	0	0	120	39	0
Soolo Archipelago — Peak on East end Sooloo	0	0	0	121	10	0
Soolo Archipelago — Beetenan	0	0	0	122	20	0
North Coast of Celebes. — Cape trees	1	21	30	121	28	0
North Coast of Celebes. — —— rivers	1	19	0	121	01	0
North Coast of Celebes. — Cape Donda 9194 feet	0	49	0	120	20	30
Watchers — North Watcher ...	0	34	40	119	51	30
Watchers — South Watcher ...	0	05	40	119	44	0
West Coast of Celebes. — Cape Temoel, North Point	0	01	30	119	43	0
	S. Latitude.			E. Longitude.		
West Coast of Celebes. —————— South Point	0	13	30	119	48	30
West Coast of Celebes. — Cape William ...	2	36	20	118	52	40
West Coast of Celebes. — Island off it not in chart	2	35	0	118	51	0
West Coast of Celebes. — Point Kyle	2	44	30	118	52	0
Dry sand bank, Macassar Straits ...	3	34	24	117	39	12
Java Sea — Royal George Shoal ...	0	0	0	116	22	30
Java Sea — Brothers	0	0	0	116	21	0
Java Sea — Moresses	0	0	0	115	51	0
South Point of Great Pulo Laut ...	0	0	0	116	13	0
Dwalder Island	0	0	0	116	11	0
Button	0	0	0	116	24	0

[We fully agree with our correspondent, whose remarks are highly creditable to him, on the necessity of a correct survey being made of this extensive and dangerous navigation, now become so important from the increase of intercourse with China, and we hope it will be soon commenced. He has pointed out many very serious inaccuracies of the charts, and we would recommend the commanders of all ships using these passages to refer to Captain Isaacson's important letter to which he alludes, which will be found in our March number, p. 153, of our present volume; also some notices of Captain Sir Edward Belcher in p. 375, as well as other valuable remarks on the same navigation in former but recent volumes of the *Nautical*.—Ed.]

PASSAGE UP THE CHINA SEA IN THE STRENGTH OF THE N.E. MONSOON IN A STEAM-VESSEL.—*Extract from the Remarks of Mr. R. C. Allen, late Master of H.M.S. Vixen.*.

TO MAKE a passage from Singapore to Hong-Kong in the strength of the N.E. Monsoon in a steam-vessel of small power, it is recommended to pass up on the west side of the Anambas, and then hauling out to the N.E. pass a few miles to the northward of the Natunas, and continue steering about N.E. until the meridian of 110° E. is gained, when a north course may be steered with the fore and aft sails set. When past the Paracels, haul up direct for Hong-Kong and face the Monsoon.

The above will, perhaps, be found the best track for steam-vessels such as the *Vixen* and *Driver* at this season.

In passing up on the west side of the Anambas, tolerably smooth water may be expected; indeed, the wind seems to lessen gradually between Cape Varela and the Anambas as you approach the latter; and then by hauling out to the N.E., passing a little to the northward of the Natunas and going into 110° E. long., a north course may be steered with the fore and aft sails set, as the wind will generally be at N.E. Strong breezes, however, may be expected, perhaps from north, but a steam-vessel using her fore and aft sails and steam, and keeping on the most advantageous tack, will generally make the passage in ten days.

If there should be a succession of strong head winds, such vessels as the *Vixen* and *Driver* would run out of fuel.

When the Monsoon has abated, or in the months of April, May, and June, a more direct route may be pursued by a steam-vessel. Passing up to the westward of the Anambas, steer for Pulo Sapata, then a little to the westward of the Paracels, and then direct for China.

The foregoing remarks and suggestions are the result of very little experience in the China Seas, but when compared with others may prove serviceable to persons conducting steam-vessels. Some officers consider that a better passage might be made in the strength of the N.E. Monsoon in a steam-vessel by passing inside Pulo Aor, then across the Gulf of Siam, for Cochin China, passing inside Pulo Condore, Ceicer de Mer, coasting along the main to 15° N., then crossing over to Hainan, making altogether a coasting voyage. But in that season the current sweeps strongly to the southward along the coast of Cochin China, and it has yet to be proved that light winds are to be found there.

Left Singapore at 7 P.M. on the 6th of March, and passed between Pedra Branca and the Romagnia Rocks into the China Sea.

Passed eight or ten miles to the westward of the Anambas on the following evening; and on the 9th, having gone a few miles to the westward of the Charlotte Bank, hauled out N.E. for 110° E. in order to be enabled to steer north on that meridian with the fore and aft sails set, and pass up to the westward of the Paracels.

On the 10th at midnight, having gained 113° E., kept away north and set the fore and aft sails, but at noon took them in again, the wind having shifted to N. Up to this time the wind had been moderate and the water smooth.

At 4h. A.M. of the 12th, it had freshened so much, accompanied by a head sea, that she could not be kept steadily at her course; the fore and aft sails were accordingly set and the ship kept on the most advantageous tack.

On the 13th at 10h. P.M., wind fresh from N.N.E., passed about twenty miles to the westward of the Tritons; and on the following day, in lat. 17° N., long. 110° E., the wind having moderated, the sail was taken in and a course steered direct for Hong-Kong, at which place we arrived at 6h. P.M. of the 16th, having made the passage in nine days twenty-three hours; the ground gone over being 1,522 miles, which gives an average rate of 6·35 miles an hour,—or taking the distance in straight lines, which is 1,400 miles, an average hourly rate of 5·85 miles, as the performance of the *Vixen* against the N.E. Monsoon up the China Sea in the month of March.

Shortest Route for a steam-vessel from the harbour of Hong-Kong to Macao.

Proceed out between Hong-Kong and Green Island, which channel has water for the largest ships, and steer for the north end of Chung-Chow or Water Island to pass between it and Lantao. There is a large rock in the middle of this channel which is not marked in the chart; it is a-wash at high water and will be seen as it is approached. Pass between the said rock and Chung-Chow, and the least water will be 3½ fathoms, then pass about midway between High Green and Lantao, which has a depth of not less than 4 fathoms. From hence Captain Ross's chart is a sufficient guide.

ANCIENT NAVAL COURT-MARTIAL.—*Extract from the Life of Sir Francis Drake.*

THE only disagreeable circumstance that occurred, on this expedition, was the misconduct of Captain Burroughs which caused his supercession, and the subsequent mutiny in the Golden Lion. It was alluded to incidentally in the "Life of Drake," but a series of papers have since been discovered, which show the steps taken by Drake at a court held by him on board his flag-ship near Cadiz, for the trial of Captain Marchaunt and the mutineers; and also a revision of the same before the Judge of the High Court of Admiralty held at Theobalds. The paper containing this is docketed thus, in the hand-writing of Dr. Julius Cæsar: "Examynacion of the Companye of the Lyon before me Doctor Cæsar, Judge of the Admiralty, the Queen's Attorney and Solicitor General, and Dr. Hamman."

In a letter of Dr. Cæsar on the occasion, he calls it "An excellent forme of a Sessions kept by Sir Francis Drake and other Captains on boarde of one of the Queen Elizabeth's Ships." This is a high compliment to the sagacity of the man who, for the first time, and without any precedent, held and devised what may properly be considered the form of proceeding on the first court-martial ever held in the navy.*

* The original manuscript of this interesting document is *now* in the British Museum, among what are called the 'Cæsar Papers,' consisting of about

It thus commences:—"A generall Courte holden for the service of Her Majestie aboarde the Elizabeth Bonaventure the 30th of Maye, 1587, before Sir ffrancis Drake, Knighte, Generall of Her Majestie's ffleete, Thomas ffennall, Vize Admyrall, Anthony Platte, Lieutenant Generall, John Marchant, Serjant Major, and the reste of the Captaynes and Masters of the ffleete as followeth:

The Generall, att this Courte, called in question and judiciallye demanded of Captayne Marchaunt howe he colde discharge himselfe and answere the Departure of Her Majestie's Shippe the Golden Lyon which he latelye gave him in charge.

Captain Marchaunt protestinge, with all earnest affection, his Innocence, alleged and declared—That there was a greate Mutyne growen amonge the Companye of the Lyon the 27 of this moneth assone as we had given over the chase undertaken, (understanding) that she was the Barke of Lyme, whereon I requyred the Master that we mighte lye close by the wynde to round our Generall. The Master answered, well Captayne, we will. But presently one of the quarter Masters came and delivered me a letter in the behalfe of the whole companye as followeth:

"Captayne Marchaunt, Captayne of the Golden Lyon, appoynted by Sir ffrancis Drake, Generall of this ffleete, We the Queenes and yours at this tyme desyre that as you are a man and beare the name of a Captayne over us, so to weighe of us like men, and lett us not be spoyled for wante of foode, for our allowance is so small we are not able to lyve any longer of it, for when as three or foure were wonte to take a charge in hande, nowe Tenne at the least, by reason of our weake victuallinage, and filthie drink, is scarce able to discharge it, and yet growe rather weaker and weaker, which surely, if it be not looked unto, will growe to greate dishonor on your parte, and to a lasting shame on our sydes, by reason of the moste worthie and most honorable Challendge of our Generall at Castel Calleys, in daringe the King's deputie, or the Kinge himselfe if he were in place, or the proudest Champyon he had, to come fourthe and chaunge a Bullett with him. But none durste once adventure to come forthe unto him, But like Cowardlike knights sayde they were not readye for him,—a most worthye enterprise deservinge lastinge fame, to come to the Gates of his Courte, yea the strongest holde of his Lande, and dare him fourthe. Our harts were then so boldened, and our stomachs so coragiouslye bente, That if theye had byn Tenne to one, we rather wished to fighte then to go to dynner. But nowe moste unfortunatelye unluckie Chaunce fallen amongest us by weakinninge of our Lymes and feblenes of our bodyes, we are not able to abyde the force of them as now, and thoughe theye be but one to one, the more is of greife, ffor what is a peice of Beefe of halfe a pounde amonge fourre men to dynner, or halfe a daye stock ffishe for foure dayes in the weeke, and nothinge ells to helpe withall. You now have holpe a little Beveridge, worse then the pompe Water. Wee were preste by Her Majestie's prese to have her

twenty volumes, five of which were recently purchased by the trustees at the late Strawberry Hill sale, and in these latter was found the document in question. Horace Walpole purchased them many years ago at a sale of Dr. Julius Cæsar's papers.

allowance, and not to be thus dealt withall, you make no more of us but beasts, And therefore wee are not determyned to goo any further, but as we brought the Lyon with our Masters helpe fourthe, so now will carye her home agayne by the helpe of God, for as the wynde is faire, and hence we will. And thus Captayne Marchaunt thinke of us as you will, and lett us have more victualls to bringe us home, for as long as it please God this wynde to blowe, we will not alter our course, but hence straighte, and so thincke of us as you please.

"The Queenes men and yours homewards by our powers."

And there withall came the Master unto me sayinge, That there was not a man that wolde sett his hands to the saylles.

Noo Master, quoth I, what is it you cannot comande them to doo being Master of the Shippe?

Stricke the Sayles, but it colde not be don for the yeards weare slonge before hande and the Toppes and Shrowds manned, and the Master sayde they wolde doo nothinge for him.

To appease this Mutanie I came amonge them myselfe sayinge my masters what soden mutanie is this amonge you, colde not this have byn spoken of when we were neare the Generall, yf any thinge had byn amys there it had byn redressed. I wolde wishe you take a better course than this, for yt will not be answered, wherewith, for the whole Company, spake one Crowe; that they wolde not loose the Wynde which was fayre, and further theye wolde not goo.

I shewed them also that for theire victualls there was in the shippe by the confession of the Purser, sufficient for 30 dayes, assuring them also on my life, that as sone as they came to the Generall theye sholde have a monthe's Victuall put aboarde them privatelye. But they cryed aloude theye wolde all home excepte some 15 or 16 gentlemen and officers.

To persuade them the rather to staye I said moreover unto them, My Masters I will nowe imparte unto you a matter which I thoughte to have secreyted until another time, That there is an Island* of greate ritches promysed to be delivered to our Generall without the losse of one man, I praye you therefore staye and talke with him, And he will laye you downe such reason as will be to the contentacion of you all. Whereat one Cornelius, one of the gunners, said, well Captayne at your requeste we will staye till night to speake with the Generall, for the which I thanked them all hartylie,—howbeit theye privatelye layde their heads together agayne, and came with one voyce sayinge, the Wynde is good, we will not staye, we will awaye, all, all, all.

When I sawe the Mutanie so farre growen I requested Mr. Borughes that he wolde worke a meane with them to cause their staye untill they cam to the Generall that they mighte acknowledge him and departe in good order from him. He answered partely that they wolde not staye for the Generall, for he knewe what order he wolde take with them.

In the midste of theire Mutanie I said unto them, what is there no honest man will acknowledge their Generall, and therewith rallied as many as wolde so doo, to holde up theire hands, when aboute 15 or 16 gentlemen and officers did, the reste cryed, home, home.

* Probably alluding to the Expedition to the Azores which followed, and of which the Golden Lyon was to have formed one.

Then I said my masters this plan hath byn layde before now by the principalls, not by the common sorte, which will not be answered; Why, quothe Mr. Borughes, howe spake you that; meane you me? I answered I wolde I knew it were you, then wolde I sone tell you of it, but I am sure it is done by the principalls.

Whereuppon I requested that I might be sette aborde the Quenes Pinnis; they told me noe, that theye colde carye me as safe into England, as Sir ffrancis Drake colde, I answered I wolde never be caryed into England by such a Company of unhonest persons as they were.

Then I requested Mr. Borughes that he wolde deale with the Company that I mighte departe, for I knew he mighte do it. My masters, said he, what unreasonable Men are you, will you neither staye for the Admyrall, nor lett the man departe. Lett him departe for shame, or ells staye for the Admyrall, doe one of the two, Then said Crowe, well Captayne yf you saye the word, you shall goo, with that they were contente.

Then once more I requested Mr. Borughes as he was a Gent and tendered the Accord that he wolde deale once more with the Companye, for I knewe he might doe it, and promysed as I was a Christian that there sholde not one haire of theire hedds perishe, Soe as they wolde staye and speake with the Generall.

He retorned to me agayne this answere, Captayne Marchaunt I have talked with them, and their answere is this, They have had many promises, and little performance, therefore theye will staye no longer.

When I sawe them so bent I called to Captayne Clifforde who was in the Quenes pynnis, desyringe him to take me in, and bringe me to the Generall, for that I wolde not be caryed into England by a Company of such unruly persons.

He cryed unto me that he wolde have me in, or ells come aboarde for me himselfe, but they manned their Boate and sett me aboarde, which when one of those in the toppe perceaved, he cryed with an othe, what, will you lett him goe, yf he fetche up the Admyrall before nighte, he will overtake us, and then you shall see what worke he will make with us.

In the midst of the Mutinie I called the Purser unto me, and demanded of him, for what cause the Company had stinckinge beveredge to drincke, whereas there were in the shippe 15 tonnes of beare, sayinge that if theye had any such, they sholde have it in the ende, and drincke the beare as longe as it lasted, whereuppon the Company with one voice cryed, yea, Captayne, God save your life, yt is your will we knowe that we sholde have it, But we have it not.

The daye before theis matter brake forthe, I ymparted my minde to Mr. Borughes, tellinge him that scince the Generall is commanded for the Islandes the next fayre daye that cometh, I will goe aboarde him, and geve him to understand in what case we stande for Victualles, that we may be the better provyded, whatsoever befall. Naye, said he, the Purser hath byn with him, and he understandethe it alreadye, for that wilbe a meane, yf he be not minded to goe for the Islandes, to make him goe thither. And therefore yf he will run into the Indies, lett him run, he knoweth alreadye what we want, never goe to him at all for any thinge; then I said, when the Purser was with him, he was so busie as

he colde not have any leasure, and therefore willed him to resorte unto him at another tyme, he answered as he did at the firste. The same tyme that the Raynbowe had her Mayn Sayle taken from the yearde by weather, the Captayne of her desired me to beare up with the Generall, to give him to understand of her distress. Then, quoth Mr. Borughes, the Generall seeth in what case he is, and beareth all the sayle he can, and stayeth not for him. Let us staye by him and helpe him, But his desyer is, quoth I, that the Generall sholde knowe it, and that his foremast is spent. Thereto Mr. Borughes answered, the Captayne is a foole, and he knoweth not what belongeth to it so well as I doe.

Captayne Clifforde sayth and testifieth that at such tyme as he came nere the Golden Lyon to take in Captayne Marchaunt he called to the Master of the same Shippe, wishing him to have care of himselfe to bring backe the Shippe to the Generall, and to appease the Companye, for that he knewe he was a man colde do much amonge them, addinge further that he was not able to answere it at his cominge home, he answered he colde not doe withall, and the Companye were resolved to goe home. The master of the same pinnisse spake unto him in like manner, and a greate deale more.

Then Captayne Clifforde called to the Companye and told them that if theye wente awaye with her Majestie's Shippe some of them wolde be hanged, upon which words Captayne Marchaunt heard them call Captayne Clifforde, Arrante Villaine.

Sentence pronounced by the Generall.—Upon due consideracion whereof, the Generall sayde; Althoughe I am not doubtefull what to doe in this case, or yet want any authoritie, but myselfe have from her Majestie sufficient Jurisdiccion to correcte and punishe with all severitie, as to me in discretion shalbe meete, Accordinge to the Qualitie of the Offences, all those seditious persons which shall be in the whole fleete, yet for the confidence I have in your discretions, as also to wytnes, or agreement in Judgement in all matters, I praye you lett me have your severall opynions touching this facte, which hathe byn declared in your hearinge this daye. In my Judgement it was as foule and untollerable a mutaynie as ever I have knowne. Captayne Marchaunt hath discharged his dutie faythefully as a true Servitor unto her Majestie. All the rest of that Shippe, exceptinge only those 12 or 16 which helde up their hands to wytness their wyllingness to retorne to our Company, have deserved a shamefull death, in that they have forsaken her Majestie's Standard and Comyssion, and forsaken her Majestie's Shippes Royall being distressed, and as much as in them lyeth hindered the service in hande, for the honor and safety of her Majetie's Realmes and domynyons. And therefore my fynall and diffinnityve sentence is this—that the Master of the said Shippe, the Boteswaine, and Mr. Borughes and Crowe, the principall contryvers and workers of this mutanie, shall as sone as I come by them, wheresoever I fynde them within my power, abyde the paynes of Deathe; If not, they shall remayne as deade men in lawe. All the rest shall remayne also at her Majestie's Mercye as Accessaryes to this treacherous defection. And thoughe it shall please her Majestie to looke uppon them with mercye, yett my Sentence is theye shall all come to the Corte-gate

with halters aboute theire neckes, for an example to all such offenders. The whole Counsell approved this Sentence as juste and verye necessarye for avoydinge the like hereafter, Which ells muste needs growe to the utter dissolucion of all her Majestie's service for the sea hereafter.

God save the Quene.

NAUTICAL RAMBLES.—THE LEEWARD STATION DURING THE WAR.

Port Royal and its Associations.

(Continued from p. 516.)

OF course we were all as cheerful and "merry as crickets", and turned to, with a hearty good will, preparing everything in readiness for desperate work. The fame which our swarthy opponents that were to be, had gained for themselves, gave a spur to our exertions on the occasion; and in the excitement of the moment we felt more than a hope that the little brig with her long nines, would be able to give them a lesson to be more cautious in future, in their attempts to pluck a feather from the Eagle's wing.

It is true, as all the world knows, that "Mister Bull" is a very confident gentleman; but, although the trait is not always a very modest one, still it has its use, especially in going into action at sea, and has been a great auxiliary to his success, especially against "Monsieur Croppo", who, habitually imbibed the contrary feeling. But "John" having been occasionally well thrashed by these very Dons now before us;—always in shallow water, be it remembered, and being ignorant of the coast, with the further disadvantage of short guns, the latter, as a natural consequence, became as confident of success as the "Magnificent" himself generally was, and was ever ready to come to blows!

"Ah! if we could only catch the rascals in a corner, what a pummelling we would give them!" These were the thoughts of the moment whilst yet gazing upon the approaching flotilla. Well, it so happened that they were forced to take up their position in a corner, exactly in accordance with our wishes, and—the sequel will tell the rest!

As, from our commanding position we could cut off the advancing enemy if he showed a disposition to retreat, it was deemed necessary to get the boats out in readiness for such an event. This was speedily done, and, we resumed our course; cautiously sounding as we proceeded; our only anxiety having reference to the depth of water; being well aware that once aground, all hopes of saving the brig would vanish.

The water, fortunately, was a little more than sufficient to float our handy little bark, and whilst it continued so, we could have no doubt but that she would play her part well. Under the perplexing circumstance of shoal-water, to say nothing of the disproportionate amount of force in the vessels about to combat, the schooners mounting from 10 to 12 guns, and the gun-boats long heavy cannon on sweeps,—it was an enterprise which required good nerve, as well as seamanship, and resolution, to perform it with eclât, but it was suited to the genius of our gallant young chief, and he executed his part to admiration.

I may state here *en-passant* a remark I made at the time, whilst gazing at the enemy's vessels, consisting of three schooners and two sloop-rigged gun-boats. The water being perfectly smooth; as they stood along shore, I fancied that I never saw vessels glide through the fluid with such rapidity before, though our brig did not appear to be moving very quickly. This no doubt was occasioned by the eye embracing at the same time the objects on shore, which, apparently, were moving in the contrary direction to the vessel; thus impressing on the mind an idea of exaggerated fleetness; and as the terrene objects seemed to recede, a more complete perception of the motion of the vessels was obtained, notwithstanding the *deceptio visus*, than if their figures had been backed only by the clear blue sky above the horizon.

Just as the flotilla came to an anchor, another gun-boat was seen rounding the nearest point to the eastward, "Here comes the tail" said the captain as he applied his glass, "Shall I try to cut it off, sir?" was the ready response, a question rather, of the gallant second luff, "Oh! by all means, but do not follow her up to the others, if she crosses you." "Launches away"—"Come Toggle, jump in—shove off, and give way my lads!" The arms were all ready in the boat, and she had a carronade mounted in the bow.

Away we went as swift as a mallard over the glassy-like surface. "Get the gun ready, and knock away her mast if you can, give way lads, give way with a will" bang—"That's very good, ha, ha, ha, look at the rascals how they scamper 'out of the bush' in their caballos—dust them with a round of canister, be smart"—bang—"Well done, that will do, now stretch out my lads"—"Give way and break the oars; huzza lads, we shall be alongside of her in a trice"—Flash—bang—whiz—splash!—"Ah! well meant,—the rascals fire well Toggle." "Yes, sir, they are good *lavanderos* at any rate, and have saved us the trouble of a wash!" "Aye! and are *ligero de pies* too, it seems; she has slipped past us!" A gun from the brig directed all eyes to her, a weft hung at her peak—"Ah! there's the recall;—oars—;" another look,—she had clewed up and anchored with a spring, within musket shot of the enemy; which had taken up a berth, close in, to the beach. The gun-boats remained end on, but the schooners were rousing on their springs so as to bring their broadsides to bear upon the brig; the beach was lined with the mounted coast-guard; and, but for their presence the Lieutenant would have dashed at the last comer after she had anchored. There was a great clamour made by these caballeros, shouting, and waving of caps and straw hats. "Give way on board."

By the time we got to the brig, the racket had begun, each man went to his quarters; and "to't with an earnest." At first, the smoke, from the rapidity of the fire, and there being little wind to carry it off, hung like a cloud around the vessels, so that only a portion of their masts and yards was visible; but as the sea-breeze freshened it was quickly wafted away, and both parties were then enabled to direct their shot with more effect. It very soon became apparent that the Dons had not lost their practice, as shot after shot struck us with startling precision, and to heighten the *pleasing* effect, which, to me at least, was a new sort of phenomenon, we could, not only *see* plainly the bar, and double-headed shot, but distinctly notice them *turn* in the air as they

advanced! My attention was called to the fact by an exclamation of the second captain of one of the guns:—"What the d——l is that coming there, its a queer sort o'bird"—whack—"A queer bird indeed thought I". "Take care of your callabash, Bob".—"Well! I'm blessed, Tom, if it beant a shot". "Oh! you're a knowing chap to find that out, don't you know they set 'em a going with a pair o'wings?" "Wings Bob? (its the powder-monkey asking for information) where are they?" "Why, they melts and drops by the way! hand us a cartridge—now go sit on the salt-box."—"Come, the wad, lad,—look sharp Ben, in with wad—close down with it—so— now round and grape; another wad—there that's clever, ram home well, boo—that's well done my hearty—there she is Hickman—now tip the brown jackets the *double!*" —thus when every flash of the Spaniard's priming was the sign that a messenger of death was on its way to the brig, these thoughtless tars were cracking their jokes with the same coolness they observe when cracking their biscuits!

At this time, of course as a youngster, I was not much given to sober reflection on this sort of game. But, as a man becomes older, and experience and increased knowledge expands his mind, without even taking a very "saintly" view of the matter, can he altogether divest himself of the idea that, it is, turn and twist it as you may for excuse, a great *absurdity* for rational creatures, *Christians withal*, to stick themselves up in a *floating house, to be shot at*; whilst, with body and soul, they strive to *kill* and *mangle* their *own species!* And this, without any personal offence, private pique, or hatred! nay, not only that, but, more farcical still, when they have done their work, shaking those, whom they have failed to shoot to death, by the hand, and saying all manner of kind and pleasing things to them, as though they were most loving brothers! Can any conduct be more inconsistent, more unreasonable? And, yet, all contend stoutly for being rational, refined, and most humane beings!

> "But this is not my theme; and I return
> To that which is immediate——"

This was the only action in which I ever had an opportunity of absolutely *seeing* the messengers of death in their transits through the air; and from the comparatively, slow motion, it was not only possible to get out of their way in time to avoid contact, but this was actually done by a group who for a few moments were looking at the enemy (during the second, or renewed action under sail) from the booms.

Some of the double-headed shot, and bar-shot without heads, fell harmlessly on board upon the deck, as if they had been chucked or pitched in, by some person from a boat alongside. Was this a proof in part, or entirely of the correct eye of the Spanish gunners, in fixing the elevation for the range? They must also have made a proper allowance for their powder; for, it is certain that the cause of our *seeing* the shots was, the badness of their powder; it was, probably both weak and damp, as the reports fell hollow and blank upon the ear. Had their ammunition been as good as ours, we assuredly had been cut up in too severe a way to have escaped without aid, except in the boats; as it was we were very roughly handled, and unfortunately lost one seaman killed, and nine sailors and marines wounded.

Whilst thus busily engaged, there was no time for sympathy with the wounded, for a greater length of time, at least, than that which a glance occupied; indeed, as seamen know, the *ceremonies of sorrow* are never practised in a man-of-war during a fight. There was a thorough seaman on board, who was the life and spirit of the crew, the Day B. M.: he was a very droll fellow, a half-fathom pig-tail bearer; he was the captain of the mid-ship gun, ycleped "the rattler," his name Hickman. I had just pointed his gun, and slipped on one side whilst he fired it, at the same instant, and abreast of where I was actually standing, a shot struck the fore-sheet sheave, one half of which flew upwards and obliquely forward, striking the gallant fellow, as he stooped to pull the lanyard of the lock, in the fore-head, tearing the entire skin backward as completely as a Cherokee could have done it. I looked up an instant at his bare head thus transformed into a sort of capuchin's nondescript cowl, and was angry with myself on feeling an almost irresistible desire to laugh. I am satisfied it did not proceed from a want of humanity, for I felt at the very same instant a sort of horror, and compassionate warmth swelling the heart, but who can define the contrarieties of our nature.

It was a cruel thump; and the poor fellow must have felt excruciating pain. The men were no better than their officers, although all made an awkward attempt to repress their smiles at the odd figure their truly gallant gun-captain cut among them*; but they were all willing, in the midst of their labour, to console him; for he was highly regarded by them. "Well, Hick, never mind the wig, so the coco-nut's safe, we'll revenge it,—boo." The first thing the sturdy tar did, after recovering from the shock, was to apply his hand to his head. "Oh! it's all safe Hick," said his second. I shall never forget the look of surprise he gave when he felt the conscious certainty that his hair had vanished—"D—— my eyes if the varmints harnt scalped me as bare as a barber's block! was ever a king's man sarved out in that fashion afore? Here Bob, lend us the loan of your flipper a bit, there, just settle the mat down in its place—so, lad so,—that's clever:—now parcel it down a trifle—I'll sarvè 'em a turn some day or other for this favour." With all imaginable coolness he took off his saturated black kerchief and bound up all taught—begging "Bob" to fashion his huge pig-tail, decent.

Well! what is the celebrity of your Opera dancers, your stage Paul Pry's,—your Mathewses, with the magic of their droll faces? Nay! what is the acting of your very best dramatists, compared to the inartificial performance of this genuine son of the wave, in a drama of reality? To me, with scarcely a thought that would fix itself into rest for an instant, amid the excitement, it was impossible to dwell sufficiently long on the incident to enable me to define the drift of the feelings which it touched without rousing. When all was over, however, and the mind was left free, the feeling of admiration arose spontaneously, strong, and undivided, by the force of those generous emotions of our common nature, as from that sympathy which the bond-hood of mutual service fails not to create in all bosoms, a tribute due to the sterling merits of a humble but most noble member of that profession, which, as a whole, has no equal under the sun!

* The inclination to levity I imagine arose from the drollery of the man *himself*, assuredly his misfortune could not have induced it.

I had some difficulty in persuading the wounded tar to go down to the doctor; and was surprised to see him re-ascend in a short time, with a small canvass bag in his hand. "Well, Hickman, how do you feel?" "Oh a little tort about the peepers, Sir, but, the doctor who is a good gentleman, has given me leave to come up and have another shy at the rascals." "What have you got in the bag?" "Oh! sir, only a few Carloes, as we call 'em, which I got from the varmints; so I'm just going to pay them back genteelly in their own coin—that all, sir." It was of no use to attempt to persuade him not to throw away his dollars so foolishly, he had taken the whim, and I allowed him to have his "fling," and then sent him below to lay down; but he soon made his appearance again upon deck.

The enemy's vessels being in a close line, it was scarcely possible for our shot to miss one or other of them; but whatever effect they may have had, the gallant Dons were in no way disconcerted, their fire being warm and continued; and it was a fortunate circumstance for us that their powder was bad, or we probably would have been *hors de combât* before we could have extricated the brig from their practised battery.

Mizen was in his glory, commanding on the fore-castle; not being far from his quarters, I occasionally cast an eye towards him, peering through the smoke and dust to assure myself that he was safe. I heard his laugh, and observing that something unusual had occurred, called out, "What's the matter, Mizen." "Oh! only a razeé; they have lightened our labour, and I can spare you a hand or two." I stepped forward for an instant, and found that the gun (a long nine) had been struck by two shots, and that the fore-part up to the muzzle *astragal* had been knocked off, as also the *cascabel!*

Having returned aft, and just fired the gun which pointed through the lanyards of the main-rigging; I must needs poke my head out of the port to see if the shot told. At the same instant a swad of grape struck the stream anchor in the channels, and threw up the rust and splinters into my face. In a jiffy my head was in board again, my eyes blinded, I felt very queer, and was almost confirmed in the belief that at least half my face was gone, when applying my hand to ascertain the fact, I felt it wet! At this moment I was roughly swung round by some person; and felt that he was performing the friendly operation of cleansing the dust from my eyes. When these were opened I saw the captain, who, laughing, said: "Oh! you're not dead yet Toggle—you'll do!" As I applied my handkercheif I found it stained with blood, yet there was no hole or wound—"that's odd" thought I, and looked to see if any of the men had been hit,—they were all sound, and working away nobly.

The circumstance was soon explained, for, masses of clotted blood came down from the top,—"There's a man wounded, or killed aloft," said the captain. In an instant the first lieutenant ran up, and called out that one of the top-men was pinned by the thigh to the mast-head! Two or three men were ordered up, and the poor fellow was extricated and brought down; he died a few hours after, literally singing until his fleeting breath passed away!

The same shot that struck the seaman, cut the main-brace. The officer who had gone up, laid out to the yard-arm, and brought the end in, and in doing which, he had a narrow escape of losing his head. In general

the "winged messengers" of death are invisible, though often heard in their flight, and the narrow escapes from loss of life or limb, are not perceptible to the eye; but in this action, with respect to the larger shot, an individual's escape from being smashed, or terribly mutilated, was often noticeable; and, fortunately, from the deficient quality of the enemy's powder, the balls were frequently arrested by the wood-work outside, and dropped into the water;—a mitigation of the severity of the evil which I, at least, was thankful for, as had not the shot, which was the cause of the severe wound of the gallant boatswain's mate, come in contact with the sheave of the fore-sheet, I should have suffered a similar dreadful misfortune as the present Commander Browne,—that is to say, the loss of both legs! he having lost both arms!

I had scarcely recovered my equanimity, when I heard and observed a marine, who was standing on the booms with his party, firing over the heads of the seamen, groan, and fall. He was badly wounded, and the barrel of his musket had in a very singular manner been twisted round his arm like a corkscrew! The stock was shattered in pieces, and the iron was so tightly fixed that it could not be removed at the moment without torturing the poor fellow; he was therefore sent down to the doctor in that state.

The sensations of the mind, during the heat of an engagement have often been attempted to be described, but without success; it seems to me scarcely possible that it should be otherwise. How can that be described which in ninety-nine cases out of an hundred has no existence? The excitement consequent in such a state, leaves but one idea predominant, that of gaining the battle, and this absorbs all others, all selfish feeling, sensations alone are felt by the timid, the faint of heart, if there should be an unhappy one of that nature found on board of a ship. "What's the matter with the jolly?" inquired the second captain of Hickman's gun—"Oh! he's only handcuffed, that's all, boo!" What were the respondent's sensations? If a fiery gulf yawned beneath him, it is my belief, he would have exhibited the same cool disregard of consequences to self, and displayed a similar inclination to make light of danger even in such an appalling shape; and have cracked his joke to the last! Such are the iron spirits to whom the country owes much of its renown; but like the malleable metal, they are not devoid of impressions,—the regular Jack tar has a heart steeled, it is true, against "fears and the like", but it is susceptible, like that of his "betters", of exalted sentiments, and no being on earth is more truly generous.

It now became evident, after about two hours practice at the hull, that, the Dons finding they could make no impression there, began to fire at the spars, and rigging. "This will never do, Prior,—up anchor." said the captain hastily to the first lieutenant—"Mr. Pipes, up anchor." —"Up anchor ahoy!" This was soon done, and sail made, the wind being light, however, our progress was necessarily slow. Two of the schooners and one gun-boat followed our example, and seemed bent on driving us off the field of battle. Our situation was critical on account of the shoal-water, and our ignorance of the coast; but, whilst feeling the annoyance, a just tribute of applause was paid to our persevering and gallant opponents; who, however, owed their security less to their bold temerity than to the untoward circumstances attending it. "Go a head

Toggle, and sound," "Aye aye, Sir,—launches away." Away we went on a mission which may be with propriety termed, a "forlorn hope."—It was a mercy we were not sunk! But,

"The sweet little Cherub that sits up aloft,
Kept watch for the life of poor Jack"—

It is enough for me to say we escaped unhurt, though well soused with the sprays!

The action was now renewed; the schooners firing at the brig, whilst the gun-boat essayed her best to sink the boat; a slight ground swell saved us; for the shot, though well directed, either fell short by a few yards, or passed over head. The lead I hove, myself, and gave the depth as audibly as my shrill pipe would allow. The water at first was perplexingly shoal, and the brig was obliged to be hove about every ten minutes, or so.

But for this provoking circumstance we might have secured one, if not both of the schooners, by running her on board. As it was, however, there being only a few inches of water under the keel, it was, on that account too hazardous to be attempted, the enemy being in-shore of us. I hardly think it possible for a gallant officer to have been placed in a more unenviable situation than was our worthy, excellent young commander, at this moment, his spirit and patience were put to a severe trial; and "somebody" scarcely responsible at this period, got a heavy "blessing" from all hands, fore and aft, for not providing a chart that could be relied on! In this matter perhaps blame is not attachable to any person of the day; but it is to be hoped that, if this coast has not since been re-surveyed, it will be; for although the Spaniards no longer hold it, it is impossible to predict the turn which affairs may take at some future time; and our naval fame must be looked to in prospective, and all aids to its unrestrained action in the aqueous area, anticipated.

(To be continued.)

Eiffe's Improvements in Chronometers.

1, *South Crescent, Bedford Square.*

Sir.—My attention has been called to an article in your October number, which I find to have direct reference to an invention introduced by me in 1836, for correcting the errors of chronometers in extremes of temperature. I owe the confirmation of that "important invention" to the adjudication of the Royal Society, which the Admiralty consulted; and I was subsequently rewarded.

In 1836, Mr. Eiffe had two chronometers tried at the Royal Observatory at Greenwich, by command of the Board of Admiralty. On that occasion the Astronomer-Royal, Mr. Airy, tested their capabilities, in person; and notwithstanding the many demands upon his time, he gave considerable attention, and at great sacrifice; but his private and public feelings enter into everything curious in science. The experiment was successful; and his report to the Admiralty expressed entire satisfaction.

The principles of Eiffe's inventions,* are metallic application. The performances of the chronometers can be judged by the figures annexed; they will be found to be superior to the best of Loseby's. All, far, very far, superior to his second one. The chronometer, Molyneux, also, is superior; the principle of which was submitted to the Royal Society, and was declared by that distinguished body to be the *same* as Mr. Eiffe's, and that the *priority* of the invention belonged to him.

In 1836 the chronometers, Eiffe 3 and 4, were entirely successful; they both mastered the difficulty of the intermediate rates. No. 3, reversed the error of gaining. In 1840 the chronometer, Molyneux 1839, showed a most remarkably fine rate, superior to those mercurial chronometers. In 1841-2 the chronometers Eiffe 16, and Molyneux 2184, when the cold was almost as intense as in 1845, determined a rate superior, steadier from week to week, and more equally adjusted than those chronometers with the mercurial application. The exact point of equalization is a matter of skill; the error of excess on the losing side is as bad as the gaining. Still the chronometer Eiffe 16, and the chronometer Molyneux 1839, showed that the mean of their extremes was faster than the intermediate; the object so much desired. The chronometer, Loseby 104, failed entirely. The chronometers Eiffe, *both* succeeded, for both lost slightly in the intermediate rate; No. 4 in particular *surpassing all the chronometers both before or since the introduction of those wonderful machines*, by the illustrious Harrison, who lived about the middle of last century; and whose son, on account of the invention, received £20,000 from Parliament. Those who wish to compare the subjoined rates, will discover the careful adjustments of those chronometers, with the metallic auxiliary, and the steadiness of the rates; the extremes are less—the number of months greater.

But where is the advantage? Where the novelty? Experiments have been tried, and are being tried on mercury. The merit of the invention of a certain power, of an improvement for arctic and antarctic purposes belongs to *me*, has been adjudged to me. If the "radical defect is inherent in most of them," it shows not that the inventor, or the supreme authority at Greenwich, or the commands of the Admiralty, *are at fault*. Improvements are slow in advance, as long as the prejudices of mankind oppose, time alone will tell, whether the metallic principle is more safe, less dangerous, more manageable when applied to chronometers. Theory, on both sides, may reason; practice is the substance of it, and both united produce utility.

The Astronomer-Royal, as I have already observed, is anxious to find the most perfect mode of making a chronometer, and I respectfully submit the following weekly sums of rates, though with somewhat dissimilar temperatures, but they are slight. These rates are extracted from the official Greenwich Reports; the mode of computing is the same as that sent to you.

* It can not be maintained that because the first 6 or more Chronometers at Greenwich have not been submitted to extremes of temperature, that they do not contain some modification, perhaps improved, of Eiffe's original plans as published by command of the Admiralty in 1842. Such a thing is just possible as ingenuity is various, but that they are not made on the principle *in universal* use before 1836 there can be no question.

No. 4, *Eiffe, tried in* 1836.

Mar. 7	Cold	+47·1	May 2	Temp.	+46.4	July 18	Heat	+46·0
14	"	44·9	9	"	46·4	25	"	48·4
21	"	43·6	16	"	42·8	Aug. 1	"	47·1
28	"	43·6	23	"	41·9	8	"	44·9
		+44·80			+44·37			+46·60

No. 3, *Eiffe, tried in* 1836.

Mar. 7	Cold	+30·6	May 2	Temp.	+26·7	July 18	Heat	+24·7
14	"	26·9	9	"	22·7	23	"	24·4
21	"	22·6	16	"	17·6	Aug. 1	"	23·9
28	"	27·8	23	"	20·4	8	"	22·5
		+26·97			+21·85			+23·87

Mr. Eiffe had no chronometers in Greenwich from 1836 to 1842, nor since.

No. 16, *Eiffe, tried in* 1842.

Jan. 22	Cold	+14·5	Apr. 30	Temp.	+17·2	July 2	Heat	+25·5
29	"	16·7	Mar. 7	"	19·4	9	"	22·7
Feb. 5	"	21·2	21	"	18·8	16	"	26·7
		+17·47			+18·47			+24·97

No. 1839, *Molyneux, tried in* 1840.

Jan. 25	Cold	−0·9	Apr. 4	Temp.	−2·0	July 25	Heat	+6·6
Feb. 1	"	2·6	11	"	0·6	Aug. 1	"	6·4
8	"	1·5	18	"	4·6	8	"	6·6
15	"	3·8	25	"	3·1	15	"	6·8
		−2·20			−2·57			+6·60

No. 101, *Loseby, tried in* 1845, *with the mercurial principle.*

Cold		Temp.		Heat	
	+6·98		−12·94		−4·70

No. 104, *Loseby, tried in* 1845, *with the mercurial principle.*

Cold		Temp.		Heat	
	+2·22		+ 0·14		−24·05

No. 348, *principal unknown to me.*

Cold	Temp.	Heat
+0·50	+6·43	+1·65

I remain, &c.

H. EIFFE, F.R.A.S., M.R.I.A.

THE LATE COMMANDER ESTCOURT.

COMMANDER Walter Grimston Bucknall Estcourt, R.N., whose melancholy death, together with that of a large proportion of the officers and crew of the *Eclair* steam-sloop, we recorded in our last Number, was the fourth son of Thomas Grimston Bucknall Estcourt, of Estcourt, in the county of Gloucester, Esq., M.P. for the University of Oxford.

At the early age of twelve years Commander Estcourt entered the navy, under the auspices of the late Vice-Admiral the Hon. Sir Henry Blackwood, when that distinguished officer hoisted his flag in November 1819, in the *Leander*, 60, Capt. Richardson, to assume the command of the East Indian station. The *Leander* returned to England, and was paid off in December 1822; and in the following March Mr. Estcourt was appointed to the *Isis*, 50, Capt. Falcon, the crew of which vessel was soon afterwards turned over to the *Spartiate*, 76, which sailed in September, 1823, with the flag of Sir George Eyre, for South America. At Rio Janeiro Mr. Estcourt was transferred to the *Eclair*, 18-gun sloop, Capt. (Sir Thomas) Bourchier, in which he sailed round Cape Horn, and continued to serve in the Pacific until the following year, when on his return to Rio Janeiro, he was transferred back to the *Wellesley* 74, which had been substituted as flag-ship in lieu of the *Spartiate*.

The *Wellesley* returned to England in December 1826, at which time the government were sending out troops to Portugal to assist in repelling the threatened invasion of that country by Spain; instead, therefore, of being paid off, the *Wellesley* was employed to convey to Lisbon a battalion of the Foot Guards, commanded by Major General Sir Henry Bouverie, together with the commander-in-chief of the expedition Lieut.-General Sir William Clinton and his staff, and Rear-Admiral Sir Thomas Hardy in command of the fleet. In the interval, however, which elapsed previous to his departure, Mr. Estcourt passed his final examination at the Naval College; and in May 1827, after his return from Lisbon, he was promoted to the rank of lieutenant; and shortly afterwards being appointed to the *Revenge*, 76, Capt. Norborne Thompson, he sailed for the Mediterranean. In consequence, however, of severe ill-health he was invalided in June 1828, and returned to England. In the following year he went to study at the Royal Naval College at Portsmouth.

In August 1830 he was appointed to the *Rainbow* frigate, Capt. Sir John Franklin, and served on the coast of Greece, especially off Patras,

during the troubles which agitated that country, until the end of 1833, when the *Rainbow* was ordered home, Mr. Estcourt then acting as senior lieutenant.

In March 1834, he joined the *Excellent*, Capt. (now Sir Thomas) Hastings, at Portsmouth, with the view of studying gunnery for a year; and at the expiration of that time was appointed first lieutenant of the *Pique*, Capt. the Hon. H. Rous, which was sent out to Quebec with Lord Gosford and the other Commissioners. The unprecedented voyage of this vessel across the Atlantic, on her return home, without a rudder, and with the loss of a considerable portion of her keel, must be still fresh in the recollection of our readers.

In April, 1836, Lieutenant Estcourt was appointed to the *Vanguard*, 80, Capt. (now Rear-Admiral) the Hon. Duncombe P. Bouverie, who was succeeded on his promotion by Capt. Sir Thomas Fellowes, C.B. During the four years that this ship was serving in the Mediterranean, Mr. Estcourt, as gunnery lieutenant, was employed in instructing the crews of the Turkish fleet in gunnery practice. On his return, in 1840, he went to Glasgow in order to apply himself to the practical study of steam power at the celebrated manufactory of Messrs. Napier and Co., and was rewarded for his assiduous attention to this branch of his profession by being appointed, in December, 1840, to the command of the *Lizard* steam-vessel, which was sent out to Gibraltar.

At the general promotion which took place in November, 1841, on the birth of the Prince of Wales, he was advanced to the rank of Commander, and was in consequence obliged to relinquish his command of the *Lizard*; and returning to England he went, with the view of obtaining further proficiency in the scientific branches of his profession, to study for some time in the senior department of the Royal Naval College. He continued without active employment until August, 1844, when he was appointed to the *Eclair* steam-sloop fitting out at Woolwich, and got her so quickly ready for service that within fourteen days after he received his commission this vessel accompanied the royal squadron when her Majesty visited Scotland. On their return the *Eclair* was ordered to proceed to the coast of Africa, and accordingly sailed from Plymouth for that destination on the 2nd of November, 1844. While on that station, Commander Estcourt was chiefly employed in the Bights of Biafra and Benin, and on the coast near Sierra Leone; and exerted himself most actively in that dangerous service which eventually proved so fatal to himself and his crew. In consequence of the fever which had broken out on board, he took the vessel, in August, 1845, to Boa-Vista, one of the Cape de Verd Islands, and, through the generous permission of the Governor, placed the sick in a fort on shore. Notwithstanding, however, all the exertions of himself and his officers, the malignity of the fever increased; and after having lost above fifty of his crew, including the assistant surgeon, and having suffered much in health from the anxiety consequent upon the condition of his men, and from his unceasing attendance upon the sick, Commander Estcourt was himself attacked by the same fatal disease, and after an illness of only five days died on the passage to Madeira, September the 16th, 1845, at the age of 38 years.

Thus out of twenty-six years passed in the service of his country, Com-

mander Estcourt passed no fewer than twenty afloat, exclusive of the time employed in studying at various periods at the Naval College and at Glasgow; and his death can scarcely fail to be deeply lamented by men of all ranks of that profession to which through life he had been so devotedly attached.

THE EASTWARD PASSAGE THROUGH TORRES STRAITS, *from India to Australia.—Extract of a letter from Capt. F. P. Blackwood, Commanding H.M.S. Fly. surveying Torres Straits, to Capt. Beaufort, Hydrographer to the Admiralty, dated August 12th*, 1845.

HAVING by our survey of this last season made good the complete practicability of a passage through Torres straits during the westerly monsoon, I think it my duty to give you such information regarding the passage, and other matters intimately connected with it and the anticipated Steam Communication between India and Australia, as may, I believe, be useful to the public service.

The passage from Singapore to Sourabaya is usually performed in five days in the west monsoon, and leaving Sourabaya the 12th January it took H.M.S. *Fly* three weeks to reach and enter Endeavour strait. The average rate of sailing on this passage was not four knots per hour, owing to light westerly winds and baffling squalls, and I am of opinion that a good steam-boat would certainly have made the passage in ten days to Cape York, the distance being nearly 2,000 miles.

From February until the end of March, when the monsoon changed to the south-east, finishing with a sharp north-west gale, the weather was moderate, with westerly breezes, occasionally accompanied with rain, but it never was for a day too thick to impede the progress of the survey, or to prevent a ship from making a passage to the eastward, through Torres straits. And if all west monsoons be like the last I should consider it much more moderate weather than that of the south-east monsoon, during the greater part of which it blows a strong gale.

A merchant schooner having this last season sailed through Torres straits (in the month of January) having safely arrived at Sydney and having returned in the month of May to "Ballytown" in "Allas straits" for another cargo viâ Torres straits, is a sufficient proof both of the importance and the feasibility of making the passage during the west monsoon, especially as the master of the schooner was furnished with no charts but those of the east coast, by Captain King.

It now remains to be considered which is the best route to follow in order to reach Sydney as safely and speedily as possible, when Cape York is arrived at.

It appears to me that the inshore track of Captain King should be followed if in a steam-vessel, at all times, as the small delay occasioned by anchoring for the first five or six nights would be amply compensated by the rapid runs she would make during the day time in the smooth water of that sheltered track, and the distance from Cape York to Sydney being not two thousand miles, she ought certainly to perform that distance in a fortnight, taking also into consideration any adverse gales

that she might meet with when in the vicinity of Sydney during the winter season.

If in a sailing vessel I would recommend steering out of Torres straits by the passage (lately surveyed by H.M. ships *Fly* and *Bramble*) north of Darnley Island, which has the peculiar advantage of clear ground in every part for the purpose of anchoring, and of being quite devoid of sunken coral patches.

If furnished with the charts executed by H.M. surveying vessels in 1844, I cannot conceive that with common caution a vessel should meet with accident in sailing out by "Raines Island Beacon", but this latter passage has the disadvantage of foul ground to anchor in, in the space between the Bird Isles and Raines Island, although the route is the shorter of the two in point of distance.

Opinions are divided as to which is the most preferable track to follow when passing through Torres straits from east to west, or the return passage from Sydney to India, but there can be no question (if speed be an object,) that in the height of the south-east trade, or from May to September, the passage entering either by Raines Island Beacon or by Bligh's Entrance, north of Darnley Island may be performed in half the space of time that it takes to follow the inshore route, along the coast; and such being the fact, it will be the passage most generally used by the merchant shipping to whom a speedy market is of the last importance.

A steam-vessel will have the great advantage also of being able to perform this return route through Torres straits in the westerly monsoon, or from November to March, at a time when impracticable for sailing vessels, and I think that in all cases her best track will be the inshore passage of Captain King, especially as she may supply herself with wood fuel, at any part of the east coast. I can see no reason why her return passage from Sydney should occupy more than five weeks to Singapore, as she will certainly carry up the south-east trade to the latitude of 14° or 15° S., when she may meet with the westerly wind.

It may now be perhaps useful to name one or two points upon the coast where depôts of coal and provisions may be placed.

The settlement Port Essington is surrounded with swamps; it is 12 miles from the sea, the refreshing breeze from which seldom reaches up to Victoria, and the country within five or six miles around is barren even for Australia. The surgeon's sick list will bear me out in what I say concerning the unhealthiness of the place, and our own Log-book will confirm the statement that, after being settled there for nearly five years, they could barely supply us with three days' vegetables, on our arrival there in a scorbutic state.

I may also add, that during our late exploration of the islands in Torres straits, and the Coast of New Guinea, we found the people inhabiting the islands, highly inclined to trade; and having a very valuable species of tortoise-shell, which they readily bartered for any European articles of hardware that we could furnish them with.

Two also of these islands, Murray and Darnley Islands, are of considerable size, and fruitful soil, and the inhabitants are by no means so savage and ferocious as described. In all our dealings with them, (and we freely went amongst them, they also repairing on board with their

women and children,) we found them faithful and honest, and not addicted to thieving, as are the inhabitants of most of the South Sea islands.

On the coast of New Guinea we found a delta of fine rivers, and a numerous population, all indicating a rich and fruitful country. It is true that we found the inhabitants very hostile, but it must be considered that we were the first Europeans that they had ever seen; and I have no doubt that, on a further acquaintance, and convinced of our power, they might be easily conciliated.

Their houses, arms, and cultivation all indicate a considerable degree of civilization, and no small intelligence in the construction of their canoes; and I think it probable that a trade might be opened with this hitherto perfectly unknown people and country.

As depôts for coals in the case of a steam-boat making the voyage to Sydney, and considering that Singapore would be a central station, Port Essington, or Cape York, in Torres straits, might form one station, and either Rockingham Bay, Halifax Bay, or Port Molle in Whitsunday Passage, on the east coast of Australia, would be convenient places for another. But it must be recollected, that if the natives of Australia once found the coal would burn, from their mischievous disposition, they are I think very likely to set fire to the depôt if left unprotected, and most of the islands along the coast are at some time or another visited by these savages for the purpose of fishing.

Wood, I need not observe, is abundant every where along the east coast of Australia, (but caution must be used whilst procuring it, the natives of the coast being treacherous to the last degree) ; and water is found at Rockingham Bay in great plenty.

To sail through Torres Strait in the West Monsoon.

The westerly monsoon commences in the Java and Timor seas, about the beginning or middle of December, and usually with rainy and blowing weather from the west and north-west.

This weather may probably last for a month, but I have reason to believe that in the narrow sea bounded on the north by New Guinea, the Ann Islands, and Timor, and on the south by the north coast of Australia, that the monsoon is not so severe as to the westward, south of the Java coast; at any rate that there is nothing to prevent a ship from making a rapid passage to the eastward through Torres straits during any part of the west monsoon, (or from December to March inclusive,) towards the latter end of which month the winds become variable ; and the change of monsoon to the south-eastward may probably be accompanied by a previous gale from the west or north-west quarter.

If a ship be proceeding from Madras or Calcutta through Torres straits she will doubtless go down the Bay of Bengal, round the west coast of Sumatra ; but if from Singapore or China she would probably find Allas straits the best passage to go through, as good anchorage is to be obtained all along the western, or Lombock side of the strait, at a distance of two miles from the shore.

The anchorage in Peejou Bay* at the southern extreme of the strait on the Lombock side appears preferable, from being sheltered during both monsoons, and offering abundance of water, fresh provisions, and vegetables at a very short notice.

A regular tide sets through the strait, the shores of which are bold to approach on both sides.

Having cleared the straits of Allas, a course may be shaped to pass to the southward of Sandelwood island,† and Rottee, (both of which points are very accurately placed in the charts,) at a reasonable distance from the latter so as to avoid the Sahul shoal, parts of which are dangerous to approach. The strait of Rottee is safe to sail through although Capt. Laws reports a danger in it, the position of which should of course be avoided by keeping on the north side of the strait.

Coupang bay is a good anchorage during the east monsoon, but in the west it is unsafe, and I believe but few ships lay there during the latter period.

From the south end of Rottee a direct course may be shaped for Wallis islands, at the western extreme of Endeavour straits, avoiding one or two coral banks,‡ on which both Capt. Flinders and ourselves got soundings; they are small in extent, but less water might possibly exist in parts which were not tried by the lead.

North Wallis island, the northern of a group of three small islets which form the guide to the western entrance of Endeavour strait is in lat. 10° 51′ 15″ S., and long. 142° 05′ E. The variation of the compass in 1845, being 4° easterly.

In steering in for Endeavour strait from the westward, in the parallel of 10° 50′ S. the high land of Prince of Wales islands will first be seen at a distance of 20 to 25 miles, extending from N.E. to E.N.E., and when at a distance of 11 or 12 miles, the northern Wallis isle should be seen from the masthead, bearing S. 75° E., and Booby island bearing N. 5° E.

The northern Wallis isle first makes as two detached islets, separated about a ship's length from each other, the southern being the larger of the two.

The southern Wallis isle is low, flat, and woody; the highest trees being on its northern extreme.

The northern and southern Wallis isles, are separated by a channel of five miles in extent, which is not safe to pass through, nor should it be attempted south of the Wallis islands, between them and the main land, that channel being full of shoals.

The soundings will be very regular in approaching the strait gradually decreasing to 5½ fathoms (sand), which will be the depth at the extreme of the sandy spit, which run out due west, six miles from the north Wallis isle.

*These positions are arranged by meridian distance from Port Essington, as considered in 132° 12′ 58″. Tanjong Lua Point Peejou bay, lat. 8° 0′ S., long. 116° 34′ 0″ E.

†th point of Sandelwood island, lat. 10° 19′ 50″ S., long. 120° 32′ 0″ E.

‡ders Bank in 15 fathoms coral, lat. 9° 56′ 0″ S., long. 129° 35′ 8″ E.

nk in 12 fathoms coral, lat. 9° 52′ S., long. 128° 39′ E.

To avoid this danger, bring the northern Wallis isle to bear E.b.S. ½ S.; when at a distance of eight or nine miles from the isle, steer a due east course; this will lead clear of the sandy spit running out from the north Wallis isle, on the extreme of which there are only two fathoms, and when two or three miles are run on this course, and north Wallis island brought to bear S.E., six and seven fathoms will be obtained, and the narrow part of the channel passed through. Cape Cornwall should now be seen bearing E.N.E.

A careful eye will clearly make out the discoloured water in the vicinity of the spit, and if there be much sea on, it will shew itself by a heavy break: should it be necessary to tack when near the western extreme of this spit, keep the lead actively going, as the channel is there only two miles across and bounded by a sandy ledge on the northern side similar in features to the spit above named, only that it is not so shoal, having three fathoms in one spot only. After entering a mile or two, the channel widens out to three or four miles.

Having brought the northern Wallis isle to bear south, steer a N.E.b.E. course to pass a mile or two south of Cape Cornwall.

Endeavour strait is perfectly clear of sunken dangers or foul ground, having an average depth of from seven to eight fathoms, coral sand, all over the strait.

The course from north Wallis isle to Entrance isle is E.N.E., and the distance seventeen miles. Entrance isle is the northernmost of the Possession isles, and the passage south of this island is perhaps the best for sailing out of Endeavour straits by; it is full two miles wide on an average depth of nine fathoms, sandy bottom, and clear of sunken dangers. The two other channels between the southern islands of the Possession group are equally safe and clear of shoals, although not quite so broad.

Entrance island may be known by having a high rounded hill on its north-eastern extremity.

The tides sometimes set through these channels with considerable strength, as much as five knots at the springs; the ebb tide setting to the N.E. and N.N.E., the flood to the S.W. and S.S.W., it being high water at full, and change at one o'clock, the rise of tide being nine feet six inches.

Having passed out of Endeavour strait by any of the passages above named, it is optional to sail through Torres straits either by Raines islet beacon or by the route through the northern part of the strait going out by Darnley island, (lately surveyed by H.M. ships *Fly* and *Bramble*,) which is in every respect a safe and practicable passage in both monsoons, and has the great advantage of the ground being perfectly clear of sunken dangers.

From Endeavour Strait to sail out by Blighs Entrance, north of Darnley Island.

From Entrance island steer N. 45° E. for thirty miles; this course will lead to a position four or five miles south of a small patch of black rocks, over an average depth of nine to ten fathoms coral sand and shells. These rocks (named Harvey's Rocks in the chart,) are fifteen

or sixteen feet above water, and are bold to approach within a mile either way. Having brought these rocks to bear N.W., distant two miles, the course must be altered to N.N.E. for twelve miles, to steer between a cluster of low woody isles called "the Sisters."

It may here be observed that the space of sea comprised by "Harvey's Rocks," "Mount Adolphus," "the Sisters," and "the Northern Coast of Australia," is, for nearly thirty miles each way, quite clear of dangers, and if the night be coming on and it be an object to avoid anchoring, a ship may safely heave to for the night after having passed through Endeavour straits nine or ten miles, or make tacks every three or four hours in the space above described, which has been closely sounded and surveyed.

These low woody isles, called "the Sisters," are separated by safe channels of from three to four miles in width, any of which may be passed through. The widest is the channel between the "Northern Sister" and "Long island, which may be distinguished by its having a low small "sandy islet," lat. 10° 6′ 30″ S., in the centre of the channel having a few small bushes on it. Pass in either north or south of this islet, avoiding a sunken patch which lies due east, nearly two miles from it, and is the only sunken danger we discovered in the strait, and steer an E.N.E. course for a low island covered with cocoa-nut trees on its northern end. Pass to the northward of this island in a clear channel nearly four miles wide, between it and a low small island called Dove island, and then shape a N.E.b.N. course, which is now the direct channel, leading between the northern islands of the strait and the great reef which here surrounds the southern coast of New Guinea.

In the absence of a chart it is difficult now to describe the track, as numerous low woody isles will appear. It may suffice to say that steering a N.E.b.N. course from Dove island for thirty-five miles all sail may be carried, and the channels between the islands sailed through with perfect confidence, recollecting in all cases that the N.W. sides of the islands are bold to approach within half a mile, the reefs which surround these coral islets always extending from their E.S.E. and S.E. extremes.

Having run thirty-three miles in this course over an average depth of nine to ten fathoms sand, varying the course a little either way according to the tide, Stephens island, lat. 9° 31′ S., will be approached, and the mouth of the strait will open, the depth of water being now seventeen fathoms. Stephens island may be known by its being rather higher than the rest of these low woody islets, and being separated from another small islet, called Cambles island, by a channel of two miles in width, which is not to be attempted. If the weather be at all clear, Darnley island, which is 580 feet high, will now be seen. It bears E.S.E. from Stephens islands, distant thirteen miles, and should water be wanted, or it be an object to obtain anchorage, good shelter during the S.E. trade will be procured in Treacherous bay on the N.W. side of the island, the depth of water being eleven fathoms, coarse sand, half a mile from the shore.

To enter Torres Straits from the eastward by Blighs Entrance, north of Darnley Island.

A ship intending to sail through by this passage should (after having

passed Cape Rodney and the S.E. part of New Guinea,) place herself in the parallel of 9° 15′ S. lat., on which lat. a west course will take her well to the northward of the Eastern Fields and Portlocks Reefs, and into the best channel for entering the strait.

The Eastern Fields, discovered and laid down by Captain Flinders, are a detached mass of reefs, the northern part of them lying in 10° 2′ S. lat., and 145° 45′ E. long.; and Portlocks Reefs are a similar group, the northern extreme of them lying in 9° 26′ S. lat., and 144° 58′ E. long., leaving a clear passage of thirty-four miles between Portlock Reef and the Great Barrier Reef, which may be said to terminate in the same parallel—viz. 9° 26′ S.

In the neighbourhood of Portlock Reefs, soundings of fifty-eight to sixty fathoms will be obtained on a coarse corally bottom, and the soundings gradually decrease to forty-five and forty fathoms as Anchor Cay is approached.

Anchor Cay is a small sand bank on the north-west extreme of a detached reef, it is in 9° 22′ S. lat., and bears N.E.b.E., twenty-four miles from Darnley island, which is distinctly visible from it in clear weather. Conjointly with another sand cay of the same description, (bearing from Anchor Cay E.S.E. three miles,) it forms the southern boundary of Blighs Entrance. Each of these sand banks are surrounded by a reef running a good mile to the S.E. from them; they are safe to sail between, and are separated from the north extreme of the Barrier by a clear passage seven miles in width.

Bramble Cay, which forms the best guide for Blighs entrance, bears N.W. ½ N., nineteen miles from Anchor Cay. It is a sand bank twelve or fifteen feet above low water mark, visible seven or eight miles from the mast head, having a reef extending a mile from its E.S.E. extreme; this sand bank is covered with coarse scurvy grass, and is the resort of numberless sea birds. A detached patch of black rocks, twelve or fifteen feet above water bears S.W.b.W., three miles from the sand bank, leaving a clear passage between them and Bramble Cay. These rocks are bold to approach within a mile.

From a position six or seven miles to the southward of this sand bank (if the weather be at all clear) Darnley island should be seen bearing S.b.W., distant twenty-eight miles from Bramble Cay; it is 580 feet high, and makes as a rounded knob from the above position. The hill of Darnley island is in 9° 35′ 20″ S. lat., and 143° 50′ E. long. A long reef, having a sand bank at its extremity, runs out N.E. nine miles from the island. To the northward of and detached from this reef are three separate coral patches, the two southern of which have sand banks on them showing at half tide, and with clear passages between them. These detached patches should be carefully looked out for as they here narrow in the channel; they always break, but at high water the northern patch is covered; it lies seven miles north of the sand bank on the extreme end of the reef that runs out from Darnley island, or distant nearly sixteen miles, bearing N.N.E. from the island itself, leaving a clear channel of fourteen miles between it and Bramble Cay, from which it bears S.b.W.

The southern part of the entrance between Bramble Cay and this northern patch should be carefully avoided at night, there being ample

room for a ship to heave to or anchor in twenty-two fathoms, coral sand, in any part of the channel north of Bramble Cay, between it and the coast of New Guinea, which is distant from Bramble Cay thirty miles at its nearest point.

Care should be taken not to come under six fathoms when standing in towards the New Guinea coast, which will lead clear at a distance of seven or eight miles from the land.

This coast is low and just visible from a ship's deck in parts, when in five fathoms. The flood tide sets in near Bramble Cay from the N.E. and E.N.E., running at the springs at the rate of nearly two knots per hour. The ebb in the opposite direction running with greater strength, but as the coast of New Guinea is approached the flood tide assumes a more northerly direction, setting along the land to the N.W. and N.W.b.W.

It may be considered that a westerly set of at least one mile per hour may be allowed for when steering in for the mouth of Torres straits, and after a gale it may exceed that rate.

The ebb tide did not appear to exert any influence when fifteen or twenty miles from the mouth of the strait, the ship being solely affected by the prevailing westerly current. Having passed Bramble Cay, the flood tide will be found to set to the W. and W.S.W., being diverted to a more southerly direction by the great reef off the southern coast of New Guinea.

About the centre of the strait, in the neighbourhood of Dove island and the Sisters, the flowing tide sets to the N.W. and ebb to the S.E.; the average rise and fall all over the strait not exceeding ten feet at the highest springs.

It is high water at Darnley island at the full and change of the moon at 9h. 30m., the tide rising nearly ten feet. On the south coast of New Guinea it is high water at 10h. 30m., the rise being fourteen feet. At the Sisters, in the centre of the strait, at 11h. At Cape York at 12h.; and at Wallis island, the west extreme of Endeavour straits, at one o'clock, the tide running full two hours longer in the stream than by the shore.

All the bearings in the above sailing directions are magnetic. The variation being 4° 0′ Easterly in 1845.

In dealing with the natives of Torres straits, caution should be used, —for although we found them in all cases perfectly friendly, yet I would not recommend placing too implicit reliance on them. No person should ever land without fire arms, and the ship should be prepared against any sudden attack.

From December or January until May water may always be procured at Darnley island in any quantity, and it is a very convenient place for the purpose, as the ships may anchor so as completely to cover the watering party.

I am inclined to think that the people of Murrays island are a better set of savages than those of Darnley island. At some of the smaller islands in the centre of the strait the inhabitants are I believe cannibals, which is certainly not the case at Darnley or Murrays islands, where the natives have abundance of food. As a general rule, however,

at any of these islands, whenever employed on shore wooding or watering, a boat should be laid off at an anchor to support any attack; savages should never be trusted.

Saint Elmo's Fire.

Among the many natural phenomena which have excited the superstitious awe of mankind in past ages, but which happily have met with their explanation among the generalizations of modern science, are those remarkable luminous appearances which in certain states of the air invest pointed bodies, such as the masts of ships, and are known to the English sailors as Comazants,—to the French and Spaniards under the more poetical name of St. Elmo's (or St. Helmo's) Fires,—and to the Italians as the Fires of St. Peter and St. Nicholas; the Portuguese call them Corpo Santo, and in some parts of the Mediterranean they are named after St. Clair.

One of the most ancient notices of this phenomenon is recorded in the Commentaries of Cæsar, in his book "De Bello Africano," where it is spoken of as a very extraordinary appearance.—"In the month of February, about the second watch of the night, there suddenly arose a thick cloud, followed by a shower of hail, and the same night the points of the spears belonging to the fifth legion seemed to take fire." Seneca also, in his "Quæstiones Naturales," states that a star settled on the lance of Gylippus as he was sailing to Syracuse. Pliny, in his second book of Natural History, calls these appearances *stars*, and says that they settled not only upon the masts and other parts of the ships, but also upon the men's heads.—"Stars make their appearance both at land and sea. I have seen a light in that form on the spears of soldiers keeping watch by night upon the ramparts. They are seen also on the sail-yards, and other parts of ships, making an audible sound, and frequently changing their places. *Two* of these lights forbode good weather and a prosperous voyage, and extinguish *one* that appears single and with a threatening aspect,—this the sailors call *Helen*, but the two they call *Castor and Pollux*, and invoke them as gods. These lights do sometimes, about evening, rest on men's heads and are a great and good omen. But these are among the awful mysteries of nature." Livy also (c. 32.) relates that the spears of some soldiers in Sicily, and a walking stick which a horseman in Sardinia held in his hand, seemed to be on fire. He states also; that the shores were luminous with frequent fires. Plutrach also records the fact, and Procossius affirms that, in the war against the Vandals, the Gods favoured Belisarius with the same good omen.

There is no doubt that during many centuries these appearances continued to be regarded with mingled feelings of admiration and fear. In the record of the second voyage of Columbus (Historia del Almirante, written by his son) is a passage which will illustrates the superstition of the fifteenth century. "During the night of Saturday (October 1493), the thunder and rain being very violent, St. Elmo appeared on the top-

gallant mast with seven lighted tapers; that is to say, we saw those fires which the sailors believe to proceed from the body of the saint. Immediately all on board began to sing litanies and thanksgivings, for the sailors hold it for certain, that as soon as St. Elmo appears, the danger of the tempest is over." Herrera also notices that Magellan's sailors had the same superstitions.

Thus it appears that the auspicious view which the ancients took of this phenomenon continues, also during the middle ages, modified, however, by the religious faith of the observed. As we approach our own times superstition gradually relinquishes its hold of this appearance; and mere matter-of-fact observers, forgetful of the bodies of saints illuminated by wax tapers, speak of it as it is, and even make it ridiculous by attributing to it a material character which it certainly does not possess. Forbid, sailing among the Balearic islands in 1696, relates that during the night a sudden darkness came on, accompanied by fearful lightning and thunder. All the sails were furled, and preparations were made for the storm: "We saw more than thirty St. Elmo's fires. There was one playing upon the vane of the main mast more than a foot and a half high. I sent a man up to *bring it down*. When he was aloft he cried out that it made a noise like wetted gunpowder in burning. I told him to take off the vane and come down; but scarcely had he removed it from its place than the fire quitted it and re-appeared at the end of the mast, without any possibility of removing it. It remained for a long time and gradually went out."

We come now to divest the phenomenon of all its romance in the plain statements of two intelligent observers. The first is Lieut. Milne of the Royal Navy, who, in a communication to Professor Jamieson states that he was off the Coast of Brazil in September 1827; the day had been sultry, and heavily charged clouds had been collecting in the south-west. As evening approached it became very dark; the lightning was very vivid, and was followed by heavy peals of distant thunder. About ten o'clock a light was observed on the extremity of the vane staff at the masthead, and shortly afterwards another on the weather side of the fore-top-sail-yard.

One of the midshipmen, curious to examine this appearance a little more closely went aloft. He found that it appeared to proceed from an iron bolt in the yard-arm; its size was rather larger than that of a walnut, and it had a faint yellow cast in the centre, approaching to blue on the external edge. On applying his hand to it it made a noise like the burning of a port-fire, emitting at the same time a dense smoke without any sensible smell.

On taking away his hand it resumed its former appearance, but he applied the sleeve of his wet jacket, it ran up it, and immediately became extinguished, and did not appear again. The light on the vane-staff retained its position for upwards of an hour, but on account of the heavy rain, and probably also from having been struck by the vane attached to the staff, it went out, but resumed its position after the rain had ceased, although with a less degree of brightness.

In the above account the only circumstance which we do not understand is the dense smoke said to have been emitted by the light. This may perhaps be attributed to the imagination of the observer, who

witnessed the phenomenon for the first time. Other accounts are given by Lieutenant Milne, but these we need not repeat; he says, that the fire usually appeared on metal, such as iron bolts and copper spindles; but on one occasion he noticed it on a spindle of hard wood, from which the copper had been removed. He states that bad weather always followed the phenomenon.

In a letter from Mr. William Traill, of Kirkwall, to Professor Traill, dated 16th of May, 1837, and published in the scientific journals of the time as an interesting notice of St. Elmo's Fire in Orkney. During a tremendous gale in February, 1837, a large boat was sunk, but the crew succeeded in getting her to the shore. This was accomplished by night; they had to wait until three o'clock on the following morning until the tide should ebb from her. During this time she was attached to the shore by an iron chain about thirty fathoms long, which did not touch the water, when suddenly Mr. Traill beheld "a sheet of blood-red flame extending along the shore, for about thirty fathoms broad and one hundred fathoms long, commencing at the chain and stretching along in the direction of the shore, which was E.S.E., the wind being N.N.W. at the time. The flame remained about ten seconds, and occurred four times in about two minutes." The boatmen, about thirty in number, who were sheltering themselves from the weather, were apparently alarmed, and about to make enquiries, when attention was suddenly attracted by a most splendid appearance of the boat. "The whole mast was illuminated, and from the iron spike at the summit a flame of one foot long was pointed to the N.N.W., from which a thunder-cloud was rapidly coming. The cloud approached, which was accompanied by thunder and hail; the flame increased and followed the course of the cloud till it was immediately above, when it arrived at the length of nearly three feet, after which it rapidly diminished, still pointing to the cloud as it was borne rapidly on to S.S.E. The whole lasted about four minutes and had a most splendid appearance."

The popular opinion is that St. Elmo's Fire now appears only on the points of ships' masts; but M. Arago confutes this opinion by adducing a variety of cases, which seem to prove that the only reason why the phenomenon is not commonly seen on the tops of church spires, and on the summits of high buildings in general, is simply because people never look out for it. But a few recorded instances are sufficient to prove that good observers only are wanting to make the phenomenon much more common.

M. Binon, who was curé of Rouzet during twenty-seven years, informed Mr. Watson, the electrician, that during great storms, accompanied with black clouds and frequent lightnings, the three pointed extremities of the cross of the steeple of that place appeared surrounded with a body of flame, and that when this phenomenon has been seen the storm was no longer to be dreaded, and calm weather returned soon after. In August, 1768, Lichtenberg noticed the St. Elmo's Fire on the steeple of St. Jacques at Gottingen. In January, 1778, during a violent storm, accompanied by rain and hail, M. Mongery noticed luminous tufts on many of the most elevated summits of the city of Rouen.

The observations of Cæsar, respecting the luminous points of his

soldiers' spears, has been repeated in modern times, and still more remarkable cases have occurred. In January, 1822, during a heavy fall of snow, M. de Thielaw, while on the road to Frey Viry, noticed that the extremities of the branches of all the trees by the road side were luminous, the light appearing of a faint bluish tinge. In January, 1824, after a storm, M. Masadorf noticed in a field near Cothen, a cart-load of straw situated immediately under a large black cloud; the extremities of the straw appeared to be on fire, and the carter's whip was also luminous. This phenomenon lasted about ten minutes, and disappeared as the black cloud was blown away by the wind. Rozet, in his work on Algiers, relates, that on the 8th of May, 1831, after sunset, some artillery officers were walking during a storm on the terrace of the fort Babazoun at Algiers; their heads being uncovered, they saw, to their great astonishment, that each one's hair stood on end, and that each hair was terminated by a minute luminous tuft; on raising the hands, these tufts formed also at the extremities of their fingers.

All these and various other phases, under which the St. Elmo's Fire appears, admit of explanation on the principle which regulates a thunder storm. The electrical balance between the clouds, a portion of the earth's surface directly opposed to these clouds, and the intermediate air being disturbed, the particles of air, by a process called induction, increase this disturbance, throwing the clouds and the earth into two highly excited opposite states, which tend more and more to combine, according to the length of the process, until at last a union is effected by what Dr. Faraday calls a disruptive discharge, which is usually accompanied by lightning and thunder.

If it were possible to connect the clouds and the earth by a good metallic conductor, the electrical balance would be restored, and no such violent discharge would ensue. But it sometimes happen that when the air is in a highly excited state, a point projecting into it will effect a partial discharge. This is accompanied by a luminous burst of light and a sort of roaring noise. The experiment can be shown at the electrical machine, and is known as the brush discharge. It usually takes place between a good and a bad conductor; it commences at the root of the brush, and is complete at the point of the rod before the more distant particles of air acquire the same electrical intensity.

Hence, in the foregoing examples, it will be seen that the points of ships' masts, the extremities of church steeples, and even less elevated objects, are all subject to a visitation from St. Elmo's Fire; or in other words, when placed in highly excited air an electrical discharge may take place upon them, of so slow a character as to be entirely free from danger. It is the immense velocity with which lightning travels, which causes it to commit such fearful havoc when it strikes badly conducted substances.

The Favorite's Hurricane.

Sir.—The copy of the Favorite's Log, and your remarks will, it is to be hoped, draw the attention of seamen, who traverse the great ocean, to

the subject, and induce them to collect all the information they can from the residents of the different islands at which they may touch. The character of Pacific, which the Spaniards gave to this ocean, is not borne out by the observations of voyagers, and the European sojourners among the islands; on the contrary storms are prevalent. Capt. Wilks, U.S.N., whilst on the exploring expedition, speaking of the Samoan group, (from 13° 30′ to 14° 30′ S., and 168° to 173° W.) says, "The climate of these islands may be termed variable, and there is much bad weather, particularly during the winter months, when long and heavy rains, attended at times with high winds and northerly gales, are frequent. Destructive hurricanes also occur, and of these, one is still recollected, which blew down the bread-fruit trees, and destroyed many of the houses.

"The air is more moist than that of the Society islands * * * * Thunder and lightning are often experienced; but, during the summer months light winds and calms are the prevailing characters of the climate." It would appear, however, that hurricanes happen in the summer also; the storm experienced by the Favorite occurring in that season; as also one recorded by the late Rev. I. Williams.

In the new theory of winds by Mr. Hopkins,* that gentleman gives the following exposition of the formation of a circular storm:—

"Motion in air is so rapidly communicated to adjoining air, and our means of obtaining the particular motions of the various parts of a large mass of air are so imperfect, as to make it difficult to detect and follow irregular movements that take place in the atmosphere, whatever they may be. But from what is known of the state of our atmosphere we may suppose that, on condensation producing an ascending current, if the supply of steam was equal on all sides, a nearly vertical ascent would be the result, and equal quantities of air would flow horizontally from all sides to supply the vacuum thus produced. But if one side furnished more steam than another, there would be a greater vacuum on that side than on the other; and, consequently, a more rapid rush of air from adjoining parts of that side into the vortex, which might possibly give it a spinning motion, in addition to its ascending motion. This being admitted, it would follow that if an ascending current, with a progressive motion, should traverse a part of the atmosphere where the dew-point is higher on one side than on the other, the ascending current might first take a spiral form, and ultimately become a whirlwind."

Referring to the West Indies the author continues:—"The trade wind, by the time that it reaches the islands, is pretty fully charged with steam; but it is to be presumed more fully on the southern than on its northern side. On the southern side, in the latitude of say 10°, the dew-point shall be, say 73°, and on the northern side it shall be 70° or 65°, or some other lower point. Now, suppose an ascending current to be formed in the middle of the trade wind, about Antigua, and then more steam would come from the east on the southern than on the northern side, and this superior quantity, in its ascent would, on condensation taking place, give out more heat on the southern than was

* "On the atmospheric changes which produce rain, wind, storms, &c."—By Thomas Hopkins. 4s.—Simpkin & Co. London.

at the same time given out on the northern side, and cause a more rapid ascending current on the former than on the latter side. Suppose further, the ascending current to spread and extend to the latitude of 10° south, and an equal distance north, and then the trade wind would supply this area, or ring, with a quantity of steam expressed by a dew point of, suppose, 73°, or a sixtieth of the then existing whole atmosphere, while on the northern side the same wind might supply a quantity of steam expressed by the dew-point of suppose, not more than 52°, or a one hundred-and-twentieth part of the atmosphere, or the difference in the dew-point might be less than this. But as the rushing in of the air below to supply the ascending current, in any part of the ring, would be proportioned to the amount of condensation in that part, the rush of air from the east on the southern side, would be greater than that on the northern side, and this being continued, might cause the ring to revolve horizontally, at the same time that the air was ascending. Thus the wind, which, under these circumstances, would be found near the surface of the globe in the neighbourhood of the vortex, would be determined by the joint forces of the ascending and revolving currents; the ascending tending to produce converging winds and the revolving whirlwinds, while the whole had a progressive motion produced by the general flow of the trade wind. If the storms of the West Indies are created in this way, they will be likely to take their rise in the part where the trade wind first encounters disturbing causes sufficient to produce an adequate ascending current. At the commencement of the storm converging winds would, probably, blow towards the area of ascent; but, as the area increased in size, the superior supply of steam in the southern part would cause that part to move forward with greater velocity than the northern part. And the greater quantity of steam and, consequently, stronger wind that would come from the south and east might only cause the outer part of the ascending current to spin round, but might also press the whole mass of the storm northward. And thus the storm taking more or less of the character of the whirlwind in this part would, in its progress, be bent from the westerly direction towards the north, and would cross the northern part of the West India islands, and the adjoining portion of the continent of America, and be turned round into the Atlantic Ocean.

"That the storms of the West Indies at times take about this course is very probable, they are said to blow from east in the southern part, and from west in the northern part.* When the storm was thus pressed northward, and had reached a certain latitude, the southern part of it alone would be acted upon by the trade wind, which would evidently dispose it to become more decidedly a whirlwind."—Page 66.

Such is Mr. Hopkin's theory. I shall merely remark that whatever may take place during the incipient state of a hurricane, it is certain that when fully in operation, the wind does not rush in horizontally, but

* There appears to be an inadvertant mistake here; as the storms of the West Indies blow exactly the reverse of what is stated above, that is: in the *south* limb, from west to east; in the *north* limb from east to west. The contrary occurs in the southern hemisphere, according to Colonel Reid; and the few examples investigated confirm his observation.

presses *downwards* from a higher stratum of air than that wherein its base is circulating. And, if the central calm be considered as the "ascending stream," it sometimes happens that it is entirely absent; the tube of ascent, probably in such cases, being extremely limited, and possessing a spiral motion.

It also happens that the *force* of the wind is generally (as stated by Mr. Redfield; the cause of which we have endeavoured to explain in other papers) *less* in the southern than in the northern part of the circle, within the tropics; so that the reverse, in reality, takes place, of the above theory.

I am of opinion that, so far from the trade wind rushing in to continue the gyration, at least at the surface, it has, after the perfect formation of the circle, nothing to do in the operation: in fact, I consider the meteor when complete, to be independent of the external wind, as regards its motion. Whatever, therefore, may give the initial impulse, and perfect the gyrating action, when it is once complete, experience induces us to believe that it is fed and continued from above; as far as the evidence of our senses can confirm a point, this may be taken as certain.

I may now venture a few remarks on the storm experienced by H.M.S. *Favorite*, in the Great Ocean (or Polynesia, South Sea, Pacific, &c.)

The first difficulty which presents itself, is the name of the island mentioned in the ship's log as Mangeea. Writers do not always follow each other in the orthography of the vernacular names of the islands, either singly or collectively into groups. This "Mangeea," of the Favourite, we can no where find, but conclude it to be identical with Mangaia, one of the Harvey group, lying about midway between the Society and the Hapai groups.

We are left to conjecture whether the ship was in north or south latitude, or east or west longitude; but as she was on the Australian station, it is presumable she was south of the equator, and had carried on her east longitude, which would place her about the Harvey group.

In this part of the Great Ocean, at the season (December) when the Favourite was there, the wind appears to be variable; the steady S.E. trade falling, it is said, short. About this time, too, the westerly monsoon begins. By the ship's log, the winds preceeding the storm were from N., N.N.W., N.E., and E.N.E. These circumstances agree with the opinion, which is of long standing in geographical works,* that hurricanes are caused by the opposition of two contrary winds. In the great storm at Jamacia, in 1780, the westerly winds prevailed to the southward along the Spanish main; it is equally probable that electricity is an agent also. The remarks in the log are very brief, and there is no reference to the veering of the wind.

At the opening of the 17th December, the force of the wind gradually increased—5 to 6. During the afternoon, the E.N.E. wind increased rapidly; at 4h. it was as high as 11. The ship was hove to on the *port*

* I think Pinkerton gives the opinion.

tack, with her head to the southward. At 8h. the wind was S.b.W.; ship's head from W.N.W. to N.W. The question is, did the wind veer round from E.N.E. to S.b.W., or did it shift suddenly? The account does not enable us to answer; but at 7h. the force of the E.N.E. wind is given at 12, or hurricane strength. This is remarkable; at least I consider it so, as according to my view, if this storm was a circular one, the E.N.E. wind was the precursor gale, and did pertain to the circle.

I do not know if the ship was provided with an *anemometer*, or instrument for measuring the force of wind, but presume she was not; if so, the force of the gale must have been assumed, and, therefore, it may be possible that the strength of this wind was over-rated.

I consider S.b.W. to have been the first wind of the circle, (supposing the storm to have been rotary.) And another remarkable feature is, that (like the *Thunder's* storm on the Bahama Bank,) the full force of the hurricane was felt at the margin at 8h. P.M. At midnight the wind was W.S.W., reduced in force to 10. But whether in the four hours it veered regularly round the five points, or shifted suddenly, the log does not explain. At 1h. A.M. of the 18th, the wind was W., still 10 in force. At 2h. the strength was reduced to 8, and the storm at an end; as at 3h. the wind was W.N.W., reduced to 4, and sail was made.

There is nothing said of rain, lightning, or thunder; not a word about the barometer, &c. The wind set in from the westward afterwards, variable. If my view be correct, the meteor would appear to have been progressing to the south-westward; and as the ship was in the right-hand semicircle, she was hove to on the wrong tack. If she had started away to the W.N.W. at noon of the 17th, it is probable she would have run away from the storm; these examples are, therefore, of use.

S. J.

P.S. It is no doubt laudable to endeavour to search out the cause, or causes, of hurricanes; but that object is of secondary consideration. And I think that those investigators who have given their attention to the subject have not yet learned all that can be learned, alone from the examples which have been given.

With reference to the various points of seamanship for the avoiding of, and the proper evolutions to be observed in, a hurricane—it is obvious that these can never be given with such confidence by any person not brought up to a sea life, as by a seaman himself.

This consideration, however, will not prevent the seaman from feeling and testifying the deep obligation, as you observe, to those scientific gentlemen of the land, who have with so much industry devoted their time and talents in the collection and arrangement of facts toward the elucidation of the mode of action of these tempests.

The most urgent point now seems, to me, to be to ascertain the lateral limits, and points of curve in the transit line or course, of the meteors, in the different seas wherein they are prevalent, and to lay these down in a hurricane chart.

Hurricanes.

Sir.—The following extracts from the recently published account of the American Exploring Expedition, during the years from 1838 to 1842, I have considered sufficiently interesting to warrant their transmission to you, for the benefit of your nautical readers, who may not be in possession of the original work.

I am, &c., S. J.

Hurricane near the Antarctic Circle.

There were four vessels comprising the expedition:—the Vincennes, Peacock, Porpoise, and Flying Fish. A severe storm was experienced by those vessels on the 29th of January, 1840. Their respective positions were:

Vincennes	63°	30′	S.	140°	0′	E.	wind S.E.
Peacock	61	20	„	154	9	„	„ N.W.
Porpoise	64	46	„	137	16	„	„ Easterly.
Flying Fish	65	15	„	150	16	„	„ North-Easterly.

Captain Wilkes, (Chief of the expedition,) of the Vincennes, observes that the Peacock (Captain Hudson) "Experienced strong gales from the N.W., which continued to increase until midnight, after which the weather moderated. The ship during this gale was in lat. 61° 20′ S., and long. 154° 9′ E. This gale is remarkable in consequence of its blowing in a contrary direction to that which the Vincennes experienced on the same day. While the former had it from the N.W., the latter had it from the S.E. Their distance apart was 450 miles in a N.E. direction." It appears that on the 1st of February the Peacock still had the wind from the N.W.

Vincennes, 28th January, 1840. "At 2h. P.M., the barometer began to fall, and the weather to change for the worse. At 5h., a gale was evidently coming on. At 8h. it began to blow very hard, with a violent snow storm. At 9h., barometer still falling, and the gale increasing. Midnight; the gale at this moment was awful. 29th.—At a little after one o'clock it was terrific, and the sea was now so heavy that I was obliged to reduce sail still further. [She had close-reefed top-sails, which circumstance shows that the wind had not reached to the force of 12.] Until 7h. A.M. all hands were on deck, when there was some appearance of the weather moderating, and they were piped down."

The wind was from the S.E., from which quarter it blew the whole of its strength, and when it began to moderate it veered to the southward. "By noon we felt satisfied that the gale was over. Towards four o'clock it cleared off; the wind now hauled to the S.W."

The different effect produced by the passage of the meteor on the motion of the atmosphere, with reference to the recession wind, as here given, is curious. To the north the air retained the impression of the current within the circle, and continued to blow from the N.W. for some days; whereas, to the south the air appears to have rushed in from the S.W.

Within the tropic in the North Atlantic, the trade-wind generally

succeeds the passage of the meteors; sometimes there is a recession gale from the S.E. To the northward of this circle, in the variables, the last shift of wind pertaining to the hurricane usually remains after the storm has passed off.

It appears that on the 30th and 31st of January following, the Vincennes experienced another gale, which lasted thirty hours; wind from the eastward and south-eastward. "The lowest reading of the barometer during this gale 28·59 inches. The lat. 66° 45′ S., and long. 140° 2′ 30″ E."

The Porpoise during the first storm was rather more than a degree and a half to the southward of the Vincennes, and in 137° 16′ E.: she had the wind from the eastward. Lieut. Ringgold, her commander, says: "I have seldom experienced a heavier blow, and towards the conclusion the squalls were severe and frequent. * * * The barometer at 3h. A.M. stood at 28·200 inches, the lowest point it reached during the gale. The temperature of the air was 26°." "The 28th set in with a light breeze from the E.N.E. At 5h. A.M. wind increasing rapidly, snow falling fast, and the weather becoming thick. Until the meridian very strong winds from the eastward; the brig under close-reefed top-sails. At 3h. P.M. hove to. At twelve to-day our position was 65° 16′ S. At 8h. P.M. blowing very heavy.

"The severe gale continued during the 29th, with a heavy sea, and snow falling thickly. At 8h. A.M. [nautical time?] the gale abated, and the clouds broke away; through the day the sun was occasionally out; the weather appeared unsettled; the sun set red and fiery; the lat. was observed 64° 46′ S., long. 137° 16′ E."

On the 30th this vessel also experienced the second gale. At 4h. P.M. on this day she fell in with two strange ships:—"Knowing that an English squadron, under Captain Ross, was expected in these seas, Lieutenant-Commandant Ringgold took them for his ships, and was, as he says, 'preparing to cheer the discoverer of the North Magnetic Pole.'" It appears, however, that the gallant officer was disappointed, as the ships proved to be French, under Captain D'Urville, who coldly passed by, contenting himself with merely hoisting his national colours; at which uncourteous conduct our American friends were very justly indignant.

The Flying Fish, (a schooner tender,) on the 29th, experienced the effects of the first gale. Thick and snowy, with the wind north-easterly. At 7h. P.M. blowing a stiff gale. At 9h. 30m., heavy gale; lying to. On the 30th, in the morning, the gale abated. Her exact position on the 29th is not given. 31st, wind N., with a heavy sea.

From the foregoing data, I infer that the storm of the 29th and 30th of January was a rotary one, and that the meteor was progressing to the south-eastward.

As the Vincennes and the Peacock were, respectively, at the S.W. and the N.E. margin of the circle, the diameter would appear to have been about 400 miles, and the circumference 1257 miles.

It was a providential circumstance that the vessels were not caught in the front of the storm, for if they had been, the probability is that not one would have escaped, considering the vicinity of the ice. The Porpoise and the Flying Fish appear not to have been involved within

the circle of the hurricane, but they both experienced extremely heavy weather. On the 21st of February, the Porpoise encountered another gale, with the wind from the S.E., in lat. 64° 9′ S., and long. 122° E., during which the barometer fell as low as 27·50 inches.

It would appear from the instance given, that in high southern latitudes the circular storm makes its transit during the summer season. In the higher latitudes of the North Atlantic their presence, hitherto, has been noticed only in the autumn and winter; but this, possibly, may arise from a want of due and close observation. Their occurrence, too, in the southern tropical region, seems to be as regular as in the northern, as we hear of their presence as early as November and as late as March.*

Hurricane at New Zealand.

The following account of a rotary storm at New Zealand is given by the Commander of the American Exploring Expedition.

"On the 29th of February 1840, there was a violent gale at the Bay of Islands, said by the Missionaries to have been the severest they had experienced, with perhaps the exception of one which took place shortly after their arrival. Many vessels suffered great damage. The Thorn of Stag harbour, which sailed a few days before, bound home, was obliged to put back, and in consequence of the damage received, was condemned as unseaworthy, as was also the Tuscan, an English whaler. The bark Nimrod arrived, having lost her topmast, and several coasters were missing, supposed to have been lost.

"Most of the vessels lying off Kororarika dragged their anchors, but they suffered less from not being much exposed; the Harriet was driven ashore at Tipoona, a few miles to the eastward, near Point Pocock. This vessel parted her cables during the night, and next morning was found a complete wreck; the crew hardly escaped with their lives.

"Besides these disasters on the water, those on the land were also great: fences were carried away, houses deluged, grounds overflowed, wharves injured, and the extensive embankments of the missionary establishment at Pahia nearly demolished. The tide rose six feet during the night of Saturday, beyond the usual mark, which caused most of the damage. The gale was experienced at the Thames, on board H.B.M. ship *Herald*, one hundred and fifty miles to the south; also by the *Flying-fish*, off Cook's straits, and by the bark Achilles, to the north.

"From the observations, it appears that the change took place at the two northern and two southern positions, in opposite directions, proving that the gale was a rotary one, and that its centre must have passed between the Bay of Islands, and the river Thames. The greatest force of the gale was between the hours of 1 and 3 A.M. on the 1st of March.

"At the Bay of Islands, a calm was observed by Mr. Dana and others, which lasted fifteen minutes, after which the wind rapidly hauled round to the westward, and blew with increased violence. On board the *Herald* the barometer fell to 28·75 inches, and from the fact of the gale having been experienced first to the northward and eastward, it is certain that

* I only know of one instance of a hurricane occurring in the West Indies late as December,—that of Vera Cruz; the earliest, in June.

it came from that quarter, and passed over New Zealand in a south-west direction: the width of the track was about five hundred miles."

It is probable that those circular storms which are experienced among the Society and Harveys groups, continue their course towards New Zealand, in a south-westerly direction; and that between the latter and the Antarctic Circle, they gradually curve to the south-eastward.

Between the chain of islands in the Pacific, and New Zealand, their routes, indeed, have not yet been established; but at the latter we find their course to be to the south-west, and a few degrees northward of the Antarctic Circle, we ascertain that their progressive line is to the south-east. So far our knowledge has been increased; and we trust the careful observations of the captains of the numerous ships employed in the South Sea Whale-fishery (as it is called) will enable future writers to complete the information; as the main point to be attained now, seems to be, to determine the progressive courses which these storms pursue throughout the great ocean. In the mean time, we may remark that it is probable those storms which originate nearer the equator, in this ocean, proceed on a more westerly line, passing over New Guinea, and the northern part of Australia, and curve towards the Pole to the westward of that great insular land; so that between the meridian of the Cape of Good Hope, and New Holland on the one side, and thence to Tahiti on the other side, seasonally, these furious tempests may be expected by ships crosing their lines of route.

Hurricanes of the Great Ocean, Pacific, South Sea or Polynesia.

Hapai Group. Captain Wilkes, W. S. N. says: "Hurricanes are frequent in this group, scarcely a season passing without some occurrence of the kind: the months of February and March are those in which they occur; but they have also taken place in November and December.

The Missionaries as yet have made no series of observations, nor kept any kind of meteorological diary; but in answer to my enquiries I obtained the information, that the storms begin at the northward, thence veer to the eastward, and end in south-east.* The wind continues to increase until it becomes a hurricane; houses are levelled, and trees torn up by the roots; vessels are driven on shore; canoes are lost or driven hundreds of miles away to other islands. In these storms the wind is frequently observed to change almost immediately from one point to its opposite; and in the same group of islands, trees have fallen, during the same gale, some to the south and others to the north. They are local in their effects, and fall chiefly upon Hapai and Vavau; if the fury of the storm be felt at Vavau, Tonga generally escapes, and *vice versâ*; but Hapai is more or less the sufferer in both cases, situated as it is between the two places.

"A very severe hurricane was felt at Lefooka, Hapai, in 1834. These hurricanes are in duration from eighteen to thirty-six hours; after a destructive one, a famine generally ensues, in which numbers of the natives die; it destroys all their crops. The natives give the name to

* There appears to be some mistake here; the reader is referred to the remarks which follow.

those which are most severe—'Afa higa faji'—or, the hurricane that throws down the banana-trees."

I may be excused for making some remarks on this statement, as it is of vast consequence to the Navigator that the veering of the wind in these violent storms should be given clear of all doubt; otherwise he may be led into imminent peril where islands and reefs abound. It will be seen by the seaman that, if the account of the successive changes of wind, as obtained from the Missionaries, were correct, we must infer that the meteors move to the north-eastward, which route is towards the equator, and not towards the Pole as is the case in the northern hemisphere.

In the *Favorite's* hurricane (see *Nautical Magazine* No. 8,) experienced off Mangeea, in "lat. 21° 58′ and long. 201° 52′" the wind veered from S.b.W. to West; establishing that, that storm, at least, was moving to the south-westward. The trade wind from E.N.E., which she had had some time before the storm broke upon her, freshened on its approach, but it is clear to me that that wind did not pertain to the circle: it was merely the precursor "blow", as our American friends would say. The hurricane mentioned by the late unfortunate Rev. John Williams, as having occurred on the 21st day of December, 1831, at Rarotonga, (Harveys group,) appears from the inference of Colonel Reid, C.B., to have commenced from the eastward, and passed off, as stated by the narrator, with the wind from the westward. I, therefore, cannot help expressing a doubt that by some means or other, a mistake has been made in naming the winds, in the account given by the Missionaries to Captain Wilkes; and that they ought to be reversed—S.E., E. and N. W. It is probable the meteors vary in the line of their progression, as those do in the North Atlantic; moving onwards between the west and south-west points, and ultimately curving towards the south-east in the higher latitudes.

That the wind in the Polynesian hurricanes is found to shift suddenly from one point to another diametrically opposite is not a new feature. Such an action is well known to take place in the storms of the northern hemisphere, and occurs, probably, only when the centre, without calm, passes over any given locality; and which also would account for trees falling in opposite directions; but this may happen otherwise, if the circle spreads over two islands east and west of each other, the trees of the eastern isle will fall with their heads to the south, and those of the western, with their heads to the north, supposing the focus of the storm to pass intermediately. I do not think that, that feature does, necessarily, point to the convergency of the wind towards a centre, round a circumference; or, that it confirms Mr. Espy's theory; as the same effect occurs in a rotary storm as it would in a convergent one, if such exists on a large scale, and is progressive.

The notice about the unequal and varying effect of these tempests upon the islands of Hapai, Tonga, and Vavau, shows merely that a slight variation occurs in the line which the focus of the storm follows, in different years; sometimes approaching one island, and sometimes the other; for the severity of one of these storms mainly depends upon the nearness of a place, or a ship, to the focus, and, perhaps, to the eccentric gyration of the nucleus. But we have yet much to learn in explanation of the *lulls* which happen near the centre, the cause of the full force of 12 being *felt* occasionally at the margin, and some other points.

Tidal Harbour Commission.—*Visitations.*

(Continued from p. 610.)

Lancaster.

The first place visited in England was Lancaster, by Mr. Godson, M.P., and Capt. Washington, R.N., two of the Commissioners.

The meeting was held in the Borough Court, and was very numerously attended by the inhabitants.

The examinations continued from ten o'clock in the morning until five o'clock in the afternoon. The inquiry embraced two objects:—first, the improvement of the port; and, secondly, the best mode of expending the £10,000 paid by the Lancaster and Carlisle Railway Company for leave from the Admiralty to place the piers of their bridge near the town in the bed of the river.

Mr. Walker, the Secretary to the Quay Commissioners, who are the conservators of the river; Mr. John Brockbank, a shipowner; Mr. E. Dawson, a land proprietor; Dr. James Johnson; Mr. Richard Gerard, a pilot; and Mr. Alexander Kennedy, master of the steam-vessel trading between Liverpool and Lancaster, were examined on the first point. We have not room for the details. It may be sufficient to state, that it transpired that the conservators are 17, and have but one person amongst them who ever sailed a vessel; that they never attempted to improve the navigation of the river, except by having a survey made by Mr. Stevenson, whose highest estimate was £15,000, and lowest £7,000, upon which they never acted; that they receive about £1,200 a year, but are of course in debt, which has been reduced to £4,000; that the river Lune might be improved, as Mr. Stevenson had recommended, so as to make it two feet deeper all the way from the sea to the quay below the railway bridge; that the freshes in the river are very great, but that they are impeded by weirs, &c.; that several lights and many buoys are wanted; and that a dredging machine is absolutely necessary. On the second point there was a great diversity of opinion, Mr. T. Higgin insisting that the £10,000 should be laid out in dredging the river; Mr. E. Sharpe, in impounding the river, so as to make a basin in it for the ships, to be brought from the projected dock at Poulton by a ship canal, to lie in. Several projects were also brought to the notice of the commissioners:—1. A dock at Poulton, in Morecambe Bay, with a ship canal of three miles to Lancaster quays. 2. A dock at Thorn Bush, at the entrance of the Lune, with a railway to the Lancaster and Preston Railway. 3. A railway from Fleetwood to Lancaster. 4. A railway from Yorkshire called the North-Western Railway. 5. A railway from Newcastle to Lancaster: and 6, the York and Lancaster Railway. It seems that the railway speculators, having monopolized the carrying trade on land, are determined now to seize upon the ports, and destroy the coasting trade. Irrespective of all railway speculations, we think that the Lords of the Admiralty are likely to expend the £10,000 in buying a dredging machine, and employing it according to Mr. Stevenson's plan, and in placing lights, beacons, and buoys in the Grange Channel of Morecambe Bay and in the parts adjacent, and after that is done, it is to be hoped that the conservators of the river will keep the river in that improved state.

Fleetwood.

The two commissioners visited this port, which is a sub-port under Preston, on the 14th of October, and examined Mr. S. Burridge, the receiver of the dues; Mr. Head, the harbour-master; Mr. S. P. Bidder, the resident engineer; Mr. Robert Gerrard, a pilot; Mr. A. M'Neiledge, the

master of a steam-vessel trading between Belfast and Fleetwood; and Mr. Kemp, the secretary to the company.

It appeared that the port is under the management of the Preston and Fleetwood Railway Company; that a dividend is now paid out of the combined profits of the railway and the port; that the river Wyre is constantly dredged, and that there will be 10 feet of water from the lighthouse to the wharf; that the Wyre lighthouse, built on Mitchell's screw piles, is not only of the greatest benefit to this port, but to Lancaster and to all mariners passing along the coast; that the wharfs are very commodious, having 13 cranes upon them; and that a dock is about to be built.

It seems that this port cannot be made fit at all times for the entrance of sailing vessels, the channel being only 200 feet wide at ordinary low spring tides, but there are two steam tugs kept to assist them. There were complaints of the Walney light, which takes more time (five minutes) in the revolution than any other light in the kingdom; also that another beacon and some more buoys are wanted. The dues paid are remarkably low, and there is no difference in the dues levied on foreign and home vessels. A vessel can be brought into the Wyre one hour and a half sooner than into the Lune.

There are several projects for railways. One from Fleetwood to Lancaster, and another from Knot-end to Clitheroe, with a direct line to Leeds.

On the whole, this new port gives great promise of being a very excellent steam-vessel harbour.

Preston.

Mr. Godson, M.P., and Captain Washington, R.N., two of the commissioners, visited Preston, and held a public meeting at the Town-hall, in the presence of the Mayor, respecting the condition of the river Ribble. The attendance was not numerous, and it seemed that the townspeople were content with the manner in which the river and port had been managed by the company, consisting of directors and shareholders, which, under the authority of several acts of parliament had improved the navigation. They examined Mr. Peter Haydock, the chairman of the Navigation Company; Mr. P. Park, the resident engineer; Mr. Jonah Ashbourne, the harbour master; Mr. George Richardson, the master of a merchant vessel trading between Wexford and Preston; and Mr. William Bond, the contractor for the works now being executed on the Ribble. The inquiry was most satisfactory to her Majesty's Commissioners, and the manner in which the harbour has been improved is highly creditable to the Navigation Company, and in particular to Mr. P. Haydock, the Chairman. The mode of improvement was planned by Mr. David Stevenson, and is the same as that which has produced such beneficial effects on the Clyde, by blowing up sunken rocks, by confining the scour of the river within parallel rubble walls, and by continued dredging of the bed of the river within them. It is due to the Corporation of Preston to report that they have always lent a willing aid to the Navigation Company. There is now four feet of water where formerly there was not one inch in depth; and large vessels can now come to the quay-side and discharge their cargoes, where flats alone were formerly seen. The company is, of course, in debt, and many things are required to be done. A small dividend is, however, paid, and the company have power to raise more money, the expenditure of which will make Preston an excellent port. All the dues on shipping come to 1s. per ton. The company will continue their operations in the river, and are about to erect a lighthouse, put down some more buoys, and extend the wharf. A railway is to be formed from the North Union Railway to the Victoria quay. The effect oduced in the Ribble ought to be inspected by all engineers who may be ployed to improve harbours.

The public will not be surprised to hear that when the last act of parliament was obtained by the company, the 8th and 9th of Victoria, it was opposed by individuals who had an interest in a neighbouring port, and who had sufficient influence to obstruct the bill, until the company consented to confine their improvements to a particular spot—the Naze Point; whereas they ought to be extended nearly two miles beyond that place:—a strong case to show the necessity of the Government taking the care of every harbour in the kingdom into their own hands; the money spent in consequence of that opposition would have built a good lighthouse.

Chester.

The commissioners went from Preston to Chester. The attendance was very numerous. A body of railway speculators from Manchester had held a meeting a few days before, and had promised the good citizens of Chester that if they would patronize their railway from Manchester to Chester, they would expend £1,000,000 sterling in making a ship canal from Dawpool, at the mouth of the Dee on the Chester side of the river, to Chester, with a floating basin at one end and a dock at the other end, to which the railway was to come.

The commissioners examined Mr. John Falkner, Mr. Thomas Wedge, the agent of the River Dee Company, Mr. John Roland, Mr. William Manifold, Mr. George Smith, Mr. Joseph Garrett, Mr. Hugh Jones, Mr. Daniel Curtis, and Mr. George Evans, respecting the state of the river Dee. It appeared that so long ago as 1732 a company obtained an act to enclose the land of the river Dee, under the pretence of improving the navigation of the river, which was to be made sixteen feet deep, and kept so; but by a later act the depth was to be only fifteen feet. The company proceeded to enclose the land, and have gradually possessed themselves of 6,000 acres, producing a revenue of £8,000 a year, whilst the river has silted up. The first thing done by the company, as soon as a pretext could be found, was to remove the standard by which the depth of the river was to be measured. By a clause in one of their acts of parliament, 17 Geo. II. c. 28, it is enacted, that if the company do not keep the river at fifteen feet deep by the standard, they shall forfeit all the rents, &c., of their lands to certain commissioners, who are to lay out the amount on the river until it is fifteen feet deep. Mr. Curtis proved that the river was six feet deeper, than it is now, nineteen years ago. It will be a question for the law officers of the Crown to answer whether the company have, by removing their neighbours' landmark—the standard—enabled themselves to keep the land and neglect the river? Every sort of impediment to navigation exists in this river; at the town is an ancient weir or causeway, ten feet high, which prevents the tide coming up, and consequently destroys the scour of the river by the return of the tidal water; the freshes in the river are also prevented from clearing the bed of the river of the sand; water which ought to flow down the river is largely abstracted by the Ellesmere canal, and emptied into the river Mersey; there is a lamentable deficiency of lights, of beacons, and of buoys. The usual consequences have followed—shipwrecks, loss of trade, refusal of freights to Chester; so that there is not one-third of the trade to the town there was so lately as three years ago.

Great improvements are, of course, projected by new companies. Mr. David Stevenson, the civil engineer, informed the commissioners that he surveyed the river Dee six years ago, also the Ribble, and other rivers, and gave his opinion that for an outlay of £45,000 more feet of water might be gained in the Dee than had been gained in the Ribble, by dredging a channel about eight miles long, and by the erection of parallel rubble walls, by which means a depth of twenty feet might be obtained at Chester quay; that a depth of sixteen feet might be made for £25,000, and that a company was

being formed to carry his plan into effect—to remove impediments, to clear the river, and to build a dock. Mr. Charles Newton, an assistant-engineer to Sir John Rennie, appeared for the Manchester and Chester Railway Company, who had offered to expend £1,000,000 on a ship canal, to obtain the same object as the simple plan of Mr. Stevenson proposed to effect at a fourth of the expense. This canal is to be twelve miles long, 300 feet wide at the top, twenty-three feet deep, and to cost £42,000 per mile. The dock is to cost £200,000, besides the floating basin, &c. No plans were produced, as none had been made.

The river Dee is about to be crossed on a low level by the Chester and Holyhead Railway. Is it too late for the Admiralty to interfere? The act was obtained before the clause in the Public Railway Act, giving the Admiralty the fullest powers to prevent such destruction of public tidal rivers.

The Yachting Cruize from Harwich to Cork.*

(Concluded from p. 552.)

The present being our last number for the year, we are compelled to be careful of our space, and shall therefore simply state that after quitting Harwich and standing down Channel no yacht clubs are fallen in with on the coast till reaching the Wight, which contains two clubs, viz: the Royal Yacht Squadron (Cowes) and the

Royal Victoria Yacht Club, Founded 1845.—*Head Quarters*, Ryde, Isle of Wight.

Commodore, T. W. Fleming, Esmeralda schooner.—*Vice-Commodore*, A. J. Hambrough, Medina cutter.—*Secretary*, G. G. Downes.

Ensign—The Red ensign of H.M. Fleet.

Burgee—Red, with Crown and Anchor between the initials V. R. (*or.*)

Yacht.		Rig.	Ton.	Owner.
Alarm	—	c	41	E. Jekyl
Amazon	—	c	75	Sir I. Walsh
Anaconda	—	sch	101	Sir C. Ibbotson
Blue Belle	—	c	25	T. Hodges
Comet	—	y	10	W. Stovin
Curlew	—	c	15	J. Weld, jun.
Dolphin	—	sch	217	F. Perkins
Eliza	—	c	20	Sir R. Phillipps
Elizabeth	—	c	35	R. Wright
Esmeralda	—	sch	129	T. W. Fleming
Fairy	—	sch	147	W. Peareth
Fleur de Marie	—	c	25	T. Hodges
Flower of Yarrow		c	183	Marq. of Conyngham
Gadfly	—	c	35	G. S. Harcourt
Ganymede	—	c	70	Smyth Pigott
Gauntlet	—	c	59	A. Fountaine
Guerilla	—	c	45	I. S. Burton
Gazelle	—	c	87	T. P. Williams
Hussar	—	sch	120	T. P. Williams
Intrepid	—	c	55	Duke of Beaufort

* In this cruize the line of route is Harwich, Ryde, Southampton, Cowes, Plymouth, and Cork, in each of which six places a distinct yacht club is now established, in addition to Dublin, Liverpool, the Clyde, the Frith of Forth, and the Thames. The Thames now contains two squadrons, viz: the *London Yacht Club*, (late the Arundel,) and the *Royal Thames Yacht Club*, founded in 1823, and not in 1775 as stated in some publications.

Yachts.		Rig.	Tons.	Owners.
Janette	—	sch	186	Lord Rossmore
Kate	—	sch	94	R. Bell
Kestrel	—	brgne	202	Earl of Yarborough
Medina	—	c	44	A. J. Hambrough
Menai	—	sch	179	W. Faber
Midge	—	c	37	W. Anderson
Nora	—	lug	27	R. Bell
Osprey	—	c	42	J. Petre
Pearl	—	c	130	Marq. of Anglesey
Petrel	—	c	98	Earl of Ilchester
Rachael	—	lug		Lord A Conyngham
Sunbeam	—	lug	18	G. Greenland
Syren	—	sch	161	Lord Keane
Violet	—	c	27	H. H. Clayton
Waterlily	—	y	31	J. N. Hibbert
Wave	—	c	50	Viscount Seaham
Xarifa	—	sch	185	Earl of Wilton
Zephyretta	—	sch	180	H. Hope

The Royal Victoria Yacht Club contains at the present moment 200 members, including the yacht owners named in the above list. For some account of the two adjacent clubs—the Royal Yacht Squadron and the Royal Southern Yacht Club—see the *Nautical* for 1844, p. 520, and the present vol. p. 102. The Royal Western Yacht Club (Plymouth) now materially increased in numbers, was also noticed in the *Nautical* for 1844, p. 632, and the Royal Cork Yacht Club in the present vol. p. 32. And our yachting pen has yet more to do in the coming year A.D. 1846.

The Great Britain.

The first result of any great experiment has always attending it some degree of interest, and for this reason we preserve the following record of the first home voyage of the Great Britain, not as a specimen of the work of the screw, but as a voyage actually performed with it. In the last voyage of the Great Britain the screw has been roughly handled, having been rendered next to useless. With regard to the general application of it for high velocities, we cannot but yet look on it as under experiment. The following letter was written to Lieut. Hosken, R.N., the Commander of the Great Britain :—

"Dear Sir,—We, the undersigned passengers in the Great Britain, steamship, having accomplished our voyage to our entire satisfaction, present to yourself, and the company whom you represent, our congratulations upon the successful result of this the first practical attempt to cross the Atlantic in a vessel propelled by the Archimedean screw propeller.

"The considerations which especially lead us to this step are based upon the magnitude of the Great Britain and the nature of her material, which, taken in conjunction with the character of her machinery and the novelty of its application, gave rise to an excited state of public opinion, which attached the highest experimental importance to the successful termination of our passage.

"Our opinion derives an additional value from the fact, not only of having successfully encountered strong adverse winds and a heavy sea of four days' duration, but that during this period the operation of her machinery never experienced the slightest interruption.

"We feel especially called upon to allude to a fact as interesting to the admirer of the vessel as important to our own comfort, that under the

influence of an ordinary breeze, there is towards the head of the vessel absolutely no vibration whatever caused by the machinery; that the vibration at the engine and towards the central part is reduced to a mere tremulous motion; and that even towards the stern, where the greatest effect might be expected, it is far less than is usually experienced in vessels propelled by paddle-wheels.

"In concluding this unanimous expression of our satisfaction, we simply confine our ourselves to congratulations upon an experiment in which you have taken such an effective and personal interest, deeming it unnecessary in assuring you of our regard to add our commendations of those high qualities for which you are already so well known and appreciated.

"We have also to express our entire satisfaction with the luxuriant supply of the table and the excellent arrangement of the steward's department."

The following is the log of the Great Britain:

Sailed from New York 4 o'clock p.m., Saturday, August 30th.

Noon.	Latitude.	Longitude.	Distance.
Sunday, Aug. 31 ...	40° 26′ ...	71° 00′ ...	146
Monday, Sept. 1 ...	40 43 ...	66 52 ...	190
Tuesday, Sept. 2 ...	41 09 ...	63 23 ...	160
Wednesday, Sept. 3 ...	43 0 ...	90 10 ...	212
Thursday, Sept. 4 ...	44 28 ...	56 16 ...	196
Friday, Sept. 5 ...	46 10 ...	52 08 ...	220
Saturday, Sept. 6 ...	47 16 ...	48 31 ...	170
Sunday, Sept. 7 ...	48 17 ...	44 52 ...	160
Monday, Sept. 8 ...	49 38 ...	41 10 ...	173
Tuesday, Sept. 9 ...	51 17 ...	33 56 ...	287
Wednesday, Sept. 10...	52 20 ...	27 0 ...	270
Thursday, Sept. 11 ...	52 0 ...	20 28 ...	243
Friday, Sept. 12 ...	52 20 ...	15 0 ...	200

Saturday morning, Sept. 13, made land.

Typhoon in the China Sea.

We have been favoured by a friend with the perusal of a letter, from which we learn the following particulars respecting the damage received by the *William IV.*

On the 7th July the weather became threatening, and the barometer fell considerably. They were then in lat. 19° 50′ N., long. 123° 10′ E. A strong gale with heavy rain set in from the N.E., veering round to the N.W. and blowing in heavy gusts. The barometer continued to fall to 28° 50′, and preparations were made for a typhoon. At 10h. A.M. the wind blew with such fury that it was impossible to stand on the deck without support, the sea blowing over the ship like a sheet of snow. In an hour the barometer fell to 28° 30′, and during the day was as low as 28° 20′. At 11h. the rudder-head broke off and the ship broached to, carrying away the topmasts, jib boom, fore yard, starboard bulwarks, and quarter and stern boats. Fortunately no water was shipped on the weather side. Such was the force of the wind that the larboard quarter boat was blown to pieces.

At 3h. A.M. on the 8th, the wind veered to S.S.W., and the mercury began to rise, but the fury of the typhoon did not cease until 4h. 30m. A.M. At daylight the wind was S.S.E. and still violent. The larboard main chains were found nearly all broken. At noon the gale moderated a little, ·t an awful sea was still running. The main-mast was however secured, a small sail set on the stump of the main-topmast.

n the 9th there was a fresh gale from the S.E. but less sea, and the

mercury rose to 29° 10′. They then steered for Hong Kong to repair damages, but when about 350 miles distant, on the 11th, it commenced blowing a strong gale from S.S.E., which increased in violence, veering to S.W., until 11h. A.M., when it blew a perfect hurricane. The barometer fell to 28° 30′; and they were obliged to throw the guns overboard, and cut away the main-mast, all the preventive tackle and shrouds being carried away, and from the motion of the vessel it was tearing up the deck and starting the beams. About two hours after, a heavy sea fell on board, which swept away all the larboard bulwarks from the fore channel to the gang-way, leaving the fore-mast almost destitute of support.

During the night of the 11th, and morning of the 12th, their situation was extremely perilous, and at daybreak they discovered they were not more than four miles from the breakers on the mainland of Formosa, a strong gale blowing from the S.S.W., and a mountainous sea running. All morning it had been blowing severe squalls and thick rain, but cleared up for about half an hour, enabling them to see their danger, when the rain again set in so close that they could scarcely see a cable's length. They were able to set a foresail and keep the ship off, and at 5h. P.M. reached Lamyet. During the whole of the 12th a heavy gale blew from the S.S.W., and on the 13th there were continued gales, with a high turbulent sea and constant rain. This night they lay to, to avoid being driven on the Piscadores. It cleared up at daylight of the 14th, and the Eastern Islands were discovered. It again blew furiously, with heavy squalls and rain, and two of the jury sails were blown away.

On the 15th there was a fresh gale from S.S.E., with a heavy sea, but a jury mainsail was got up, which enabled them to make a better course, and Amoy was reached at 4h. P.M. on the 16th. Five days had passed without their being able to cook any thing, and for nearly nine days they had not a dry suit of clothes to put on.

We are happy to learn that the cargo is not materially damaged. The greatest credit is due to Captain Woodin and the crew, for their unwearied and fearless exertions to save the vessel, which alone could have preserved her under circumstances so full of danger.

MUTINY ON BOARD THE CHAMPLAIN.—We have made inquiries into the history of this case, and we hear that a few days after the prisoners had shipped with Mr. Penton, there arose a scarcity of seamen in St. John's, and wages advanced considerably. They could not persuade the master to release them from the terms of their articles, and thereupon, it is said, they conspired to compel him to put them ashore after they had been a few days at sea. The first mutinous symptom was shown by the prisoners commanding one of their own body, Hincker, to put the ship about and steer a course quite opposite to that directed by the master. The master, however, succeeded in causing the vessel to keep the right course, and then it was suddenly discovered that the vessel was making water. On this the prisoners in a body refused to work. It is said an augur was found upon one of them, and that with this augur they kept continually boring holes, until at one time there was eight feet and a half of water in the hold. Being in danger, the prisoners just pumped sufficiently to keep the ship afloat, and then they "knocked off." This conduct was repeated for several days. At last a brig hove in sight. The master immediately hoisted signals of distress which were fortunately observed, and boats sent to the relief of the Champlain. The two masters communicated, and the result was that the seven prisoners, after a long struggle, were placed in irons and conveyed to the first port, which happened to be on the coast of Maine.

This outline, we are assured, is strictly correct. The details, we are also

assured, will show most courageous conduct on the part of the master and the officers of the ship, who remained faithful to their duty.—*Shipping Gazette.*

Examination of the Officers of the Royal Mail Steam Packet Company.

(Concluded from p. 613.)

Mr. has been examined by me as to his proficiency in Navigation, &c., and has demonstrated his qualifications as follows.

Rating.	Requirements.	How far qualified.
4th Officer	To find the latitude by meridian altitude. To work dead reckoning. To find time of high water. To know the use of the quadrant, and how to adjust it. To be able to use the lead, hand, reef, and steer.	
3rd Officer	In addition to the above: To take and work double altitudes. To find the latitude by sun, moon, or a star. To know all the lights on both sides of the English Channel, say from Scilly and Brest to Southampton and Guernsey To work the chronometer. To know log line and glass. To know how to handle a steamer under all circumstances. To know the use of the charts	
2nd Officer	In addition to the above: To find the variation of the compass by amplitude or azimuth. To have a knowledge of trigonometry.	
1st Officer	In addition to the above: To have a thorough knowledge of all branches of navigation and seamanship, also of the lights, soundings, dangers, and pilotage in general, of the English Channel.	
Commander	In addition to the above: To have some knowledge of the navigation of the different places embraced in the scope of the Company's operations abroad. To be acquainted with the nature of Bills of Lading, Bills of Health, and other ship's papers.	

I do hereby certify that the said Mr. is duly qualified for the situation of Officer in one of the R.M.S.P. Company's ships.
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[We have now laid before our readers an ordinary course of examination pursued by one of the instructors of officers of the Mercantile marine, who is, we believe, examiner of the officers appointed by the Oriental Steam Navigation Company to their vessels. We understand that the officers appointed to the Pacific Steam Navigation Company's vessels undergo a previous examination.]

Cape Light.—The light is not yet on Cape Agulhas! Notwithstanding all that has been said; we have recorded the establishment of many lights in various parts of the world, and yet another year closes without seeing a light on Cape Agulhas. The following is all we can place on record concerning it in our present volume:—

Lighthouses.—We are glad to find that the long-talked-of light on Cape Agulhas, as well as that on Cape Receif, at the entrance to Algoa Bay, are both at last to be taken in hand, as the home government have written for copies of the plans and estimates, the originals having been mislaid. At the same time they call for such additional information, as it may be in the power of those here interested to render, proposing for this purpose as more suitable the construction of iron towers, now everywhere of more general use than stone. We understand, however, that the latter has been reported on as preferable, in consequence of the materials being mostly on the spot, and therefore that the structures could be completed at much less expense; besides saving the employment of an engineer expressly for iron erections of such magnitude.—*Cape of Good Hope Shipping Gazette*, Aug. 15.

The Eclair.—In a preceeding page we have recorded the services of the late commander of this unfortunate vessel. The following, from the *Times*, is a list of the men lost by this ill-fated vessel by disease, accident, and desertion, also those who have been dismissed and invalided, from the time she left England up to the 12th ult., from the ship's books:—

The initials A.B. signify able seaman; O.S., ordinary seaman; R.M.A., Royal Marine Artillery; R.M., Royal Marine; Q.M., quartermaster.

April 3rd, Robert Chipp, R.M.A., was drowned near Plantain Island, whilst on boat service; 23rd, William Mageary, A.B., fever; 24th, Thomas Watson, O.S., ditto; 25th, Michael Corry, O.S., ditto. May 28th, William Conner, stoker, ditto; 29th, William Forrest, R.M.A., ditto. June 4th, James Fielden, captain of the forecastle, ditto; 5th, James Ward, O.S., ditto; 7th, John Field, boy, ditto; 11th, Benjamin Hill, R.M., ditto; 15th, W. Mills, captain's clerk, ditto. July 7th, William Startup, O.S., ditto; 27th, Mr. Davison, passenger from the Albert, ditto, and William Moran, stoker, ditto; William Kirby, R.M.A., ditto. August 4th, William Wright, purser's steward, ditto; 6th, George Crossfield, A.B., ditto; 9th, William Hardman, O.S., ditto, and William Kirk, R.M.A., ditto; 14th, William Rice, rope maker, ditto; 17th, Henry Gauge, caulker, ditto, and Elick Coe, A.B., ditto; 20th, Richard Motton, boy, ditto; 24th, William Skinner, A.B., ditto; 28th, William Gardiner, Q.M., ditto, and Garratt Keeley, stoker, ditto; 30th, Patrick Connoly, stoker, ditto, and John Gibson, Q.M. September 2nd, George Cahlin, R.M.A., and Samuel Craunage, R.M.; 3rd, John Athorn, boy, William Brennan, captain's coxswain, fever, and George Brown, O.S., ditto; 4th, William Thomas, stoker, ditto, Mr. Symonds, naval cadet, ditto, and Henry Harriss, boy, ditto; 5th, Mr. Gorman, master's

assistant, ditto, Thomas Davis, leading stoker, ditto, and Mr. Hallett, purser, ditto; 6th, Richard Martin, R.M., ditto, James Dillon, boy, ditto, and James Garratty, stoker, ditto; 7th, John Powers, A.B., ditto, John Warrick, midshipman's steward, ditto, Michael Galaghar, A.B., ditto, and John Hancock, R.M.A., ditto; 8th, John Goodhugh, A.B., ditto; 9th, Mr. Hartman, doctor's mate, ditto; 10th, Thomas King, captain's cook, ditto, Henry Shearman, R.M.A., ditto, and William Claggett, stoker, ditto; 13th, Thomas Lloyd, boy, ditto, and William Penn, boy, ditto; 15th, Michael Sullivan, stoker, ditto; 16th, Captain Estcourt, R.N., ditto; 17th, James Steel, A.B., ditto; 18th, Dr. M'Clure, R.N., ditto, and James Lark, R.M., ditto; 19th, John Long, boy, ditto; 20th, Nicholas Dillon, A.B., ditto; 21st, Mr. Machoncy, surgeon, ditto, James Wills, Q.M., ditto, and James M'Dermott, stoker, ditto; 25th, Charles Monk, stoker, ditto; 26th, Thomas Coleman, O.S., ditto; 28th, John Culver, R.M.A., ditto; 29th, Hamilton Fudge, captain's steward, ditto; 30th, William Thorp, O.S., ditto. October 3rd, John Walsh, master-at-arms, ditto, Thomas Hails, R.M., ditto, and Henry Langmead, blacksmith, ditto; 6th, William Henry Fitzgerald, sergeant R.M.A., ditto; 9th, Mr. Bernard, R.N., surgeon, ditto; 10th, Mr. James Saunders, pilot, ditto; 12th, Mr. Isaacson, third lieutenant, R.N., ditto.

List of those who ran away at Sierra Leone.—Charles Dunn, A.B., Henry Hill, A.B., Thomas Foster, leading stoker, James Taylor, O.S., Henry Fielderson, A.B., Richard Derrick, stoker, and Thomas Williams, A.B.

Invalided.—John Week, Shebar, and Thomas Smith, Sierra Leone.

Discharged.—William Martin, Sierra Leone, Henry Copeland, ditto, and William Newman, ditto.

Deposit in Steam Boilers.—On board the *Echo* steam-vessel an experiment is being tried of Dr. Ritterbandt's patent method of preventing incrustation in steam boilers. The substance employed is chloride of ammonium, a harmless salt. One of the greatest difficulties with which engineers have to contend in the application of steam is the incrustation of the boiler, producing not only a great expenditure of fuel, but often fatal explosions, especially in tubular boilers, as their peculiar form almost entirely prevents scaling or the application of other mechanical remedies. The experiment has been eminently successful in its application to the boilers of the *Echo*, under the superintendence of the patentee and Mr. Taplin. The substance does not discolour the water, nor communicate to it any unpleasant taste or smell; it has no injurious effect upon the metal of the boiler; does not increase the density of the water, therefore does not produce "priming;" nor does its application involve any alteration in the boilers now in general use. The action of the chloride of ammonium is to change the carbonate of lime into chloride of calcium, which is not deposited by heat; and as the chrystalization of other salts, such as the sulphate of lime, depends in a great measure upon contact, the absence of nuclei of solid carbonate prevents, in a great measure, their formation. In marine boilers this is very evident, for after adding chloride of ammonium, and thus preventing the precipitation of insoluble carbonate of lime, it is almost impossible to obtain crystals of common salt, thus "blowing off" is rendered almost unnecessary, in proof of which the George IV., commercial steamer, plying between this port and Southampton, worked twelve days without blowing out, merely by using a small quantity of the material every day, nor when the boiler was afterwards examined was there any exhibition of a tendency to deposit.—*Portsmouth, Nov.* 4.

Collision and Desertion at Sea.—We take the following from the *Shipping Gazette*, and repeat it here in the hopes of seeing the correctness of the statement denied, and the real truth of the occurrence explained.

Boston, U.S., October 16th.—The *Boston Times* has the following:—"The Sardinia, Foster, arrived at this port from Liverpool on Friday, the 10th inst. In conversation with some of the crew, who appear to be men of intelligence and respectability, we learn that on the night of the 7th instant, about midnight, and when in the vicinity of George's and Newfoundland Banks, the Sardinia came violently in collision with an unknown brig, which appeared to be crossing her bow, carrying away her fore-top-mast, and the ship's fore-yard. The night was clear and the sea smooth at the time, and the ship was sailing eight or nine knots an hour. The brig was struck in the forechains, with sufficient force to have sunk her instantly, had the blow been received amidships. Immediately after the collison cries were heard of "save us, save us," and the passengers of the ship urged Mr. Foster to stop the vessel and ascertain the extent of the injury; but he obstinately refused to do so, and with an oath ordered the men to put on more sail, which order was obeyed. The Sardinia had three large boats, and the hands were anxious to man them and go to the relief of the sufferers, but their humane feelings could not be gratified.

"This is an extraordinary case, and we hope, for Captain Foster's sake, and the cause of humanity, that the statement, as furnished to us, is exaggerated, though from the manner and character of our informants there is little room to doubt its correctness."

Extract of a letter from Hong-Kong, dated September 30th, 1845.

"The *Espiegle* sails to-morrow for Foo-chow-Foo in the river Min, where we are likely to remain for some time, we have a consul there. The weather here has been very hot, but now as the north-east monsoon has set down, it is getting a little cooler; we arrived at Hong-Kong on the 8th of this month. After we left the Cape we went down as far as Desolation, but the weather was so bad we did not make the land, and bore up for St. Pauls, where also it blew so fresh we could not communicate, although we saw some persons on shore with the French flag flying. We were obliged to leave an anchor behind with 56 fathoms cable, not being able to weigh it owing to the heavy sea. The thermometer was below freezing point at Desolation. The men-of-war at present here are the *Agincourt* with the flag, *Dædalus*, *Vestal*, *Iris*, *Wolverine*, *Espiegle*, *Royalist*, and *Vixen* steamer; the *Castor* sailed for New Zealand on the 27th, also the *Driver*, touching at Singapore. The Admiral is anxiously expecting the *Vulture*; it is said he will soon go up to Chusan."

The Loss of the Margaret Steamer.—The Margaret screw-steamer, plying between Hamburgh and Hull, was wrecked on the Memmerst, near the island Juist, on Wednesday, the 22nd of October, when sixteen passengers and three of the crew perished. The crew were eleven in number. We hear that the passengers were all Jewish emigrants.

Torres Straits.—Singapore, Sept. 4th.—The barque Mars, Brooks, from this port for Liverpool, was totally lost the 29th of August, having struck on a sunken rock bearing from the island of Pulo Panjang N. ¼ W., distance four miles; she sank in twenty minutes after she struck; the crew and commander lost every thing, with the exception of the clothes in which they stood; the whole of the ship's papers were lost.

The following letter has been addressed to the editor of the *Singapore Free Press:*

"Sir,—I beg you will publish for general information the unfortunate loss of the schooner Maid of Athens, the Corringa Packet, and the Hyderabad, in Torres Straits.

"The Maid of Athens entered the Barrier Reef a little to the southward of the wreck of the Ferguson, and, in hauling up for Sir Charles Hardy's Islands, struck on a coral patch, not laid down on the charts, in lat. 12° 07′ S., long. 143° 32′. The crew were picked up on the following day by the Spy, Pain.

"The Corringa Packet was lost on the 8th of May on a reef near an island, not laid down, in lat. 16° 15′ 30″, and long. 149° 58′ 46″. On the 11th of June, I took eleven of her crew off the nethermost of Sir Everard Home's Islands, where they had been for fifteen days, subsisting on shell-fish and what little water they could find in the cavities of the rocks; three died the morning I fell in with them, and the others were in a dreadful state of exhaustion. These are the only survivors of twenty-one men who left the wreck on a raft on the 23rd of May.

"On our arrival at Booby Island, we found that Captain Chilcot had arrived there safe with the passengers, and as many of the crew as the boats would carry, and had proceeded to Port Essington in the schooner Shamrock. The Hyderabad's passengers and crew had also arrived at Booby Island in their boats, and proceeded to Port Essington. She was wrecked on the Barrier Reef near the Cumberland's entrance, and went down a few hours after she struck in twenty fathoms water, with 120 horses on board.

"I have the honour to be, Sir, your obedient servant,

"J. B. Pain, *master*, *brig Spy*.

"*Timor Coupang*, July 4th, 1845."

Loss of the Mary.—*Liverpool*, *Oct.* 20.—The Bucephalus, Small, arrived here, reports having spoken, Oct. 6, lat. 36° 46′ N., the Indian, from Launceston (Van Dieman's Land) for London, which reported the loss of the Mary, Newby, from Sydney (New South Wales) for London, May 24, in Bass Straits, 17 passengers drowned, viz: Mrs. Heather and two children, Mrs. Gray, Mrs. Turnbull, two daughters of Captain Collins, three daughters of Captain Newby, six children of Mrs. Evans, and Sarah Fowkes.

The following were saved: Captain Collins, (13th Light Dragoons,) Mrs. Collins, Miss Elizabeth Collins, Miss Emma Collins, Miss Strathallan Collins, Sarah Larson, Mrs. Newby, Mr. and Mrs. Reeves, Miss Reeves, Mrs. Stanbury, Mrs. Evans, Mr. and Mrs. Hefferman, Stephen Dwyer, Mr. T. Newman, Mr. James Abbott, Mr. J. Jones, Mr. Joseph Wilkinson, Mr. Heather, Master Arthur Heather, Michael Nicholson, George Hempson, and Patrick Gardner.

The Mary sailed from the heads of Port Jackson 19th May; the wind being unfavourable for New Zealand, Captain Newby attempted the passage through Bass Straits; but when off Wilson's promontory, the wind coming round to the W., the attempt was relinquished of proceeding by the Cape of Good Hope. On the 24th, the ill-fated ship struck on a reef, and almost immediately became a total wreck; crew and passengers, as above enumerated, were landed on Flinder's Island.

The Arctic Expedition.—The Prince of Wales, whaler, has brought an account of the Expedition so late as July 26th, in lat. 74° 48′ N., and long. 66° 13′ W.; when both ships were fast to an iceberg, the crews in high health and spirits, and the officers, from the state of the sea, quite hopeful of a successful voyage.

The Russian line-of-battle-ship, Ingermanland, with the flag of Vice-Adm. Lulka, has arrived in Plymouth Sound, with the Grand Duke Constantine, second son of the Emperor of Russia, on board. Every attention due to the rank of the distinguished Royal visitor and his attendants is paid, with full

permission for his Imperial Highness and the officers of the man-of-war to visit the Royal dockyard and the other Government establishments in the neighbourhood.

The capabilities of the Bovisand Reservoir were tested during the recent visit of the ships composing the Experimental Squadron at this port. On the morning of the 23rd ult., at break of day, Adm. Sir S. Pym, the Commander-in-Chief of the Squadron, made a signal for the several ships to take in water by their own boats from the reservoir, and so active were the parties concerned that thirty tons of water were taken on board the *St. Vincent* before breakfast. Mr. Ferguson, the active manager of the watering establishment, was delighted at the opportunity thus afforded him of displaying its capabilities, and spared no effort to show what could be done on occasions of watering a whole fleet, and succeeded in filling a half-ton water-butt from one hose in a period short of two minutes. A supply altogether of 760 tons of water was taken on board the several vessels, and the time occupied in so doing was about a day and a half. The reservoir contains 12,000 tons, and the water is excellent in quality.—*Plymouth Times.*

Newly Invented Fire Engine.

Cuxhaven, Nov. 10th, 1845.

Sir.—Allow me to direct your attention to the Fire Engine invented by Messrs. A. and G. Repsold of Hamburgh, as I think these engines will be the best pumps which can be put on board any ship; the larger the vessel the more advantageous they will prove.

It is useless for me to say a word to recommend them, for you may see them at C. A. Preller's, Esq., East Cheap, No. 8, London, and judge for yourself. However, allow me to put down some observations on these pumps.

1—The pump may be worked in any part of the ship above the water line.

2—With the same work they throw up more water than a common pump.

3—They do not foul with trifles; and if they should foul, they are worked backwards and clear themselves.

4—They may be used as common pumps, and at the same time serve as fire engines.

I remain, &c. Admirer.

To the Editor, &c.

Nautical Notices.

Hydrographic-Office, Nov. 7th, 1845.

Oland Light; (*North Point;*) *Baltic.*—The Swedish Government has given notice that on the 1st of the present month a fixed light was established at the Northern End of the Island of Oland on the Coast of Sweden in the Baltic.

The Lighthouse stands on a detached rock, called Axelholmen (sometimes Storgrundet), which lies off the North Point of Oland, in lat. 57° 22′ N. and long. 17° 6′ East from Greenwich. It is 103 feet above the level of the sea, and may be seen at the distance of four leagues between the compass bearings of E.b.N. round to that of N.W.

SUNKEN ROCK.—*Lima, Sept.* 2nd: Masters of vessels proceeding from the port of Pisco for the Chincha or Guano Islands should give the N.E. point a good berth until the centre of the island bears S., and then haul into their moorings abreast of the loading shoots, there being a sunken rock about half a cable's length off the N.E. point of the island, not laid down in any chart. Masters of vessels loading guano with the shoots at the Chincha Islands are cautioned against throwing overboard ballast at the loading anchorage; any master, or masters, permitting ballast to be thrown overboard in less than twelve fathoms of water will be fined in the penalty of 100 dollars.

NEW BOOKS.

MEMOIR *descriptive and explanatory, to accompany the charts of the Northern Atlantic Ocean, &c.*

THE NEW SAILING DIRECTORY *for the Ethiopic or South Atlantic Ocean, &c.*

There are few books published for the use of seamen that have more real claims to their patronage than those of which the above are the titles; not only as giving them, in a compendious form, all the information which can be useful to them concerning the sea thay have to cross, and the port to which they are bound; but shewing also where there is room for their own contributions. For it is from the contributions of seamen, that these works are constructed. They are the gatherers of the treasure, which divested of its useless excrescences, is arranged systematically for their own use.

The works before us are good specimens of this working process. It is true there are many places of which they do not treat, and many of which they treat very little. Yet of the principal places frequented, by shipping, situated on the shores of the Atlantic, both north and south, they give the best information which seamen can desire, and no careful Commander will go to sea without them. We are glad to find that among the numerous authorities quoted in these works, our own pages have contributed not a little. This is as it should be. It was with the view of diffusing valuable information that this journal was established, and we are glad to see our original intentions so well seconded.

NEW CHARTS.

Published by the Admiralty, and Sold by R. B. Bate, 21, Poultry.

Since our last notice of these publications, the following have appeared. Among them we perceive the harbour of Kittie (by Lieutenant Reynolds,) a description and directions for which appeared in our last number. This survey is a very creditable production, and the more so, coming from an officer out of the usual line of surveying services, as the fruits of leisure time from the general routine of duty. The Annual Tide tables will not fail to be acceptable, nor will the New Catalogue of the numerous Charts and Books of Sailing Directions, published by the Admiralty be less so, on account of the numerous very valuable additions it has lately received, than from the great reduction that it reveals in the prices of the charts. Verily, if Ship-masters will lose their ships, let them not plead expensiveness of charts as an excuse for having none on board.

WEST COAST OF ITALY, *Leghorn, Piombino, &c. &c., Anchorages by Capt. Smyth*, 1823, *Price* 2*s.*

KITTIE HARBOUR, *(Caroline Islands,) by Lieutenants Reynolds and Edwards* 1839, *Price* 1*s.*

ST. LAWRENCE RIVER, *Quebec to St. Croix, Sheet* I, *by Captain Bayfield*, 1837. *Price* 2*s.*

ST. CROIX, *to Batiscan Sheet* II., *by Captain Bayfield*, 1837. *Price* 2*s.*

HOUTMANS ROCKS, *with plans of Recruit Bay and Eastern group harbours, by Commander Stokes*, 1840, *Price* 2*s.*

TIDE TABLES *for* 1846 *Price* 1*s.* 6*d.*

NEW CATALOGUE *of Admiralty Charts for* 1846, *Price* 1*s.*

WRECKS OF BRITISH SHIPPING.

Continued from p. 612.—cs. crew saved; cd. crew drowned.

VESSELS' NAMES.	BELONG TO.	MASTERS.	FROM.	TO	WRECKED.	WHEN.
Alert	275 Donagadee	Mc Faden	———	———	offPort Rush	Oct. 9,
Ameron	———	———	St. John NB	Dublin	abandoned	Sept. 9,
Ann & Jane	Scarboro'	Otterburn	London	Scarboro	Off Cromer	Oct.
Belfast	Belfast	passed	abandoned	by	Thetis	Sept. 27,
Boldon	———	Clench	Windau	Hull	St Abb's Hd.	Oct. 21,
Britannia	280 ———	Gun	———	———	Thurso	Oct. 19, 1d
C. C.	London	———	———	———	China Sea	June 21, cs
Concord	Scarboro'	Williams'n	Newport	Southampt'n	Shingles	Oct. 18, cs
Cyrus	Sunderland	seen	abandoned	off	Spurn	Oct. 25,
Drummore	———	———	Leith	Aden	At sea	Aug. 6,
Ewins	285 ———	———	Newport	Cork	Cork Harbor	Nov. 1,
Eliz. & Rebecca	Hobarton	Shepherd	Whaler	———	P. Gardiner	April 18,
Fearnought	Ipswich	Ganet	Petersburg	———	Oland	Oct. 11, cs
Gen. Ledgerton	Sunderland	———	———	———	I. Gotland	Sept. 12, cs
George & Mary	Jersey	———	———	———	Aberdeen	Oct. 9, 1d
Glengary	290 Cork	Hughes	———	———	———	Oct. 5, cs
Hope	———	Tadman	Stockton	London	Holm Sand	Aug. 16,
Jonathan Fell	———	———	Liverpool	———	G. Castellos	———
John Williams	Newcastle	Howe	Liverpool	Berwick	Fraserburg	Oct. 21, cd
Lisbon	Woodbridge	Saltmarsh	Middlesbro	———	Filey Bridge	Oct. 20, cs
Lord Oakley	295 Sunderland	Crow	———	———	C. Algiers	May cs
Maid of Athens	———	———	Sydney	Hong-kong	Booby I.	May 31,
Maraboo	Sunderland	Robinson	Sunderland	London	Sunderland	Oct. 3, cs
Mary	———	Newby	Sydney	London	Bass Straits	May24,17d
Mary Loader	———	Shaplen	Langland B.	———	Langland B.	Oct. 18, cs
Mars	300 ———	Brooks	Singapore	Liverpool	P. Panjang	Aug. 29.
Minerva	———	———	———	———	WickonFour	Oct. 22,
Permute	Sunderland	Dodds	Archangel	———	Walsey I.	Oct. 8, cd
Prince	Stockton	Trattles	———	———	Ronaldsay	Oct. 9, 3d
Rosanna	———	Mc Neiley	Quebec	Glasgow	George S.	July 9,
Rose	305 Whitby	Watts	———	———	Sunderland	Oct. 3,
Royal Consort	———	———	———	by fire	Calcutta	———
Shamrock	———	———	Launceston	Hobart T.	Storm Bay	all lost
Speculation	Castletown	Lawson	Whitehaven	———	Isle Man	Oct. 2, cs
Superior	———	Mowatt	Cronstadt	Ipswich	foundered	Oct. 4, cs
Thomas	310 ———	———	Newcastle	Hamburg	C. Holland	October
Undaunted	Kincardine	Scott	Saldanha	Cork	C. Finistere	Oct. 7, cs

309—Mate, one man, and two boys went on board H. M. S. Comus, and reported they had left the master and remainder of crew and two passengers (one a female) on board, and that they had been plundered by the people from the shore.

326—Having been in contact with the Vladimir steamer, arrived at Cronstadt from Liverpool.

PASSAGE DOWN THE CHINA SEA *from Macao to Anjer.*—The American ship Rainbow, Captain Land, sailed from Macao on the 6th of June, at noon, and anchored at Anjer, Java, on the evening of the 30th, a few hours over twenty-four days. We are enabled to give the following extracts from her journal:

"At noon, 6th June, got under way from Macao Roads. 7th,—in sight of Java Islands off the coast of Hainan. 11th,—saw Island of Pulo Canton, on coast of Cochin China. 17th,—passed close to the Great Catwick, having worked down the coast of Cochin China close in shore, having on the 14th, eight days out for us, spoken H.M.'s troop-ship *Sapphire*, fifteen days from Hong Kong. 21st,—saw the Island of North Natunas. 25th,—passed Island of St. Barbe. 29th,—passed through Gaspar Straits. 30th,—anchored at Anjer."

Captain Land made the passage some years since in twenty-eight days, and it has been suggested that it would be advantageous for powerful vessels to adopt this track in June, July, and August, instead of that through the Soloo Seas and Strait of Macassar.

MEMORANDUM OF PASSAGES OF SHIPS FROM CHINA TO ANJER AGAINST THE S.W. MONSOON.

Vessels.	Captain.	Left.		Arrived.		Passage.
1843.						
Sir H. Compton	Boulton	May	25	June	30	36 days.
Anna Eliza	Grainger	June	15	July	21	36 „
Mor	Baxter	July	4	Aug.	8	35 „
Emma	Dawson	July	18	Aug.	20	33 „
Corsair	Fraser	Aug.	12	Sept.	21	40 „
Petrel	Pruen	Aug.	19	Sept.	22	34 „
Syed Khan	Horseburg	Aug.	19	Sept.	22	34 „
1844.						
Anna Eliza	Grainger	April	15	May	16	31 days
Mor	Baxter	June	3	July	6	33 „
Emma	Dawson	May	27	July	8	42 „
Sir H. Compton	Boulton	June	17	July	23	36 „
Ardaseer	McIntyre	July	11	Aug.	15	35 „
Louisa	Forgan	Aug.	5	Sept.	11	37 „
Lanrick	White	Aug.	19	Sept.	15	27 „
1845.						
Mor	Baxter	May	4	June	6	33 days
Anna Eliza	Grainger	May	22	June	24	33 „
Kelpie	Syme	June	12	July	11	29 „
Sir H. Compton	Boulton	June	12	July	18	36 „
Frolic (Am.)	Faucon	June	27	July	26	29 „
Lanrick	White	July	9	Aug.	6	27½ „

Copied from the Resident's Report Book.

ROHDE'S UNIVERSAL SIGNALS.—In a former number we entered on the subject of a system of universal signals by Capt. J. L. Rohde, of the Royal Danish Navy, or a system which, translated into different languages, becomes from its contruction universally applicable, and by its extraordinary economy is rendered universally available. It is not with the view of superceding Marryatt's code, or any other, that we would be thought to advocate that before us, but to lend a brother seaman all the assistance we can command in his endeavours to establish an inexpensive, while it is a com

prehensive, method of enabling all ships, of any nation whatever, to communicate with each other.

Differing from all other codes of signals, Capt. Rohde makes use of the least possible number of flags. Indeed, when they are not at hand, and they certainly do not abound plentifully in merchant ships generally, he dispenses with them, and resorts to shirts, trowsers, or other articles. But these are of course not intended to be used except in extreme cases of urgency where no other means are at hand. Even the broad pendant can be dispensed with and a wheft may be substituted, as this, when used, is always accompanied by the former, and when used alone must be considered as the pendant.

New Signal Lights.—The *Comet* steam-vessel, Lieutenant-Commander W. Prettyman, went out of Portsmouth harbour on the afternoon of the 22nd ult. about four o'clock, with Mr. Rettie, civil engineer, on board, to make a trial at Spithead, by order of the Lords Commissioners of the Admiralty, of the efficacy of the new signal lights for preventing collisions at sea, the invention of the latter gentleman. It will be remembered that on Thursday a trial of these lights took place in the presence of Admiral Sir Charles Ogle, the Commander-in-Chief, Sir Richard Grant, Flag Captain, Commodore Chads, of the *Excellent;* Captain Stevens, Royal Marine Artillery; and other distinguished officers; but, from the unfavourable state of the weather on that occasion, a fair opinion could not be arrived at of the merits of this important invention. On Friday night the officers who were appointed to report upon the trial, comprised Captain Moubray, of the *Victory;* Commander Smith, of the *Rattler;* and Commander Crispin, of the Royal Yacht; who were accompanied by several other officers and gentlemen, among them Mr. Allen, master of the *St. Vincent;* Mr. Smith, the inventor of the paddle-box boats, &c. These gentlemen took their station under the Spur Redoubt, on the beach on the Portsmouth side, the entrance to the harbour, while the *Comet* steamed in a line with the *President* frigate, (on board of which Lieutenant Prettyman went and instructed the officer on duty to observe the signals,) and lay to at Spithead, two miles from the Spur Redoubt. At seven o'clock the shore party burned a blue light, (to mark their presence, we presume,) and immediately after the experiments commenced on board the *Comet*, off the Spit buoy, from which distance the various lights (white, green, and red) were most clearly and brilliantly distinct to the party on shore; in fact, we could distinctly make out any of the above tints at six miles distance, which we did on the occasion of the first trial, notwithstanding the bad state of the weather, and with our unassisted eye. By means of the two colours (red and green,) drawn across the glass of the lamp, (which contains an eccentric burner, of peculiar construction, highly and most brilliantly magnified by a powerful reflector,) after the fashion of a magic lantern, the sailing orders "starboard," and "port," were given with the greatest readiness and unmistakeable precision. A blue light indicates "in distress," and the white light, "all's well," "go ahead," &c. All these lights were very palpably and most clearly distinguishable from the shore, by the unaided vision, at the above distance, but, even allowing they were, from the state of the atmosphere, only distinguishable at one-fourth of that distance, it would allow ample time, as one of the above officers most justly observed, for any vessel, steamer or not, to avoid collision. The experiment was highly successful. We could not, nor could any of the officers, distinguish the lights hoisted at the mast-head of the *President*, lying within a mile and a-half of Southsea beach, but the various coloured lights exhibited on board the *Comet* were most brilliantly distinguishable. So great a boon as this invention must prove, in preventing

such lamentable disasters at sea as frequently, almost nightly, occur from the want of proper means of indicating the course of vessels, cannot be too highly estimated, especially when we state that the inventor has introduced it not for the purposes of gain, but solely with a view of benefiting mankind generally, and that portion especially whose life is spent upon the waters.

These lights have already been fitted on board the *Rattler* screw-propelled steam sloop, the gallant commander of which testified most warmly to their unparalleled efficacy and superiority over all other modes of communication by night, or in thick weather by day, at sea.

The present light to indicate a signal of distress, used in Her Majesty's service, is a blue one, a sort of port-fire which only burns at the longest period twenty minutes, many of them not two minutes, and is a very expensive article, whereas Mr. Rettie's can indicate whether the vessel in distress be a steamer or not, and, instead of appearing merely as a flash in the pan, will, if needed, continue to burn twelve hours at a cost of not exceeding 6d. Such, indeed, is the utility of these signals, that the admiral of a fleet can give instructions to the ships under his command during action in the dead of night, if needed, with the greatest facility.

The invention is applicable to the mercantile marine of the world as well as the Royal, as colours can always be distinctly understood when and where language can be of no avail; but it is not the ingenuity alone of this simple lamp which displays the master-mind of the inventor; it is by the simple code of signals connected therewith which enhances the value of the invention, which are so extremely simple that the greatest novice in sea service can in a moment be made perfectly *au fait* in the use of them. After the experiments were finished, Lieutenant Prettyman sent up a beautiful rocket, which had a most splendid effect as the "golden rain" descended upon the water.

The ramparts were numerously visited by scientific men anxious to watch the result of the experiments. Great credit is due to the Admiralty, and to the flag-officers of this port, for the warm manner in which the invention has been espoused, and for the facilities given to the inventor in proving the paramount efficacy and utility of his invaluable code of signals.

Slave Trade.—We learn from our vessels of war stationed on the Western Coast of Africa, that from the 1st April, 1844, to 6th July, 1845, no fewer than seventy-five slavers have been captured by them, the Americans having during the same period captured one slaver, making a total of seventy-six captured vessels during a period of fifteen months and six days. Commodore Jones the senior officer on the station, arrived here in the steam-frigate, *Penelope*, on the 6th inst., and we regret to state that he is suffering in health from the effects of the climate, and from the arduous nature of the duties which are confided to him.—*St. Helena Gazette*, Sept. 13th.

Piracy and Murder.—On Tuesday night, on the arrival of the ship Tory in the West India Dock, Mr. Evans, Inspector of Thames police, and other officers, went on board, and took into custody seventeen of the crew, who were charged with mutiny and murder. On Wednesday morning they were brought before Mr. Broderip, at the Thames police court. Mr. Clarkson, the barrister, and Mr. Hawkley, clerk to Crowder and Maynard, solicitors, conducted the prosecution. The evidence was most contradictory, and the case is involved in a great deal of mystery. The question is whether the crew had been in a state of mutiny, and the Captain, in suppressing it, had inflicted wounds on the men; or whether he had, when drunk, been in the *habit* of using a cutlass and committing the most wanton and barbarous

assaults on his men. It was charged, on the one hand, that the crew, headed by the mates, who had died (one of them having committed suicide, and the other been killed), had a design on the Captain's life and intended to run away with the ship. On the other hand it was alleged that the Captain, while he was in a drunken and excited state, cut the men about with a cutlass, and that he caused the death of two men, while another, to escape from his violence, had jumped overbourd and drowned himself. The carpenter admitted the Captain was frequently drunk, and wounded the men with a cutlass. The Captain made out a *prima facie* case of mutiny in three instances. "Allowing," observed the magistrate, "for a good deal of exaggeration in the defences of the men who had addressed him, there was a good deal in what they said which demanded the strictest attention. He remanded this case for a week, and the Inspector would take care that the Captain, Johnston, was forthcoming at the next examination. It was his particular desire that the Captain should be examined by a competent medical gentleman, to ascertain whether there were any marks of recent wounds on his head and on his leg, and particularly to ascertain if they were incised wounds, likely to have been made with a bayonet. He would give no opinion on the guilt or innocence of any parties, but this case must undergo a most searching inquiry."

Mr. Pelham has been retained to conduct the prisoners' defence, and their statements to that gentleman are similar to those made at the police court, but more in detail; and if they are to be credited, the conduct of the Captain, after reaching the island of Ascension, was most inhuman and revolting. The men charge him with three murders, and they will be supported in their accusations, in a great measure, by the female passengers, who were witnesses of continual acts of drunkenness and brutality on his part. The most extraordinary disclosures will be made at the next examination. The relations and friends of the deceased mates, Rambert and Mars, intend to demand the arraignment of the Captain to answer for having caused their deaths.

TIDAL HARBOUR COMMISSION AT HULL.—We understand that the evidence given before the Tidal Harbour Commissioners at Hull is considered of so much importance, that the merchants of that town, with that public spirit for which they are well known, have determined on publishing the whole proceedings of the court in detail. Mr Thomas Wood of Osborne Street, will have the pamphlets ready in a few days.

MONTHLY RECORD OF NAVAL MOVEMENTS.

Apollo, Com. Radcliffe, 12th Oct. arr. Santa Cruz Tenerife from Cork for Cape; 12th Nov., *Avon*, st. surv. v., Com. Denham, sailed for Coast of Africa to survey the Gold Coast.

Comus, 18, Com. T. S. Thompson, left Buenos Ayres 8th Aug.; she received on board on that day, off Buseo, the mate, one man, and two boys, of the Johnathan Fell, merchantman, from Liverpool, who reported that their vessel struck on a sunken rock, off the Great Castellos, and was run ashore in a sandy bay close by; they had left the master and remainder of the crew and two passengers (one a female) on board, but they had been plundered by people from the shore. *Conway*, 26, Capt. Kelly, arr. at Mauritius 16th Aug.; *Cormorant*, Com. Gordon, 8th Aug. arr. at Callao from Panama; *Cyclops*, Capt. Lapidge, 11th Sept. arr. at Rio from Plymouth.

Daphne, 20, Capt. Onslow, 8th June left Callao for Navigators Islands. *Endymion*, 44, commissioned at Plymouth 25th Oct. by Capt. T. Henderson; *Espiegle*, Com. Thompson, 12th Aug. arr. at Singapore from Cape;

25th, sailed for China. *Eclair*, 13th Nov. paid off at Sheerness by Lieut. Harston.

Formidable, 84, Capt. Rich, 21st Oct. paid off at Sheerness; *Fox*, 42, Sept. 4th arr. at Madras; *Frolic*, 16, July 19th arr. at Valparaiso from Rio, 24th Aug. arr. at Callao, 29th sailed; *Firebrand*, st. v., 13th Aug. left Buenos Ayres for Monte Video; *Fly*, surv. v., Capt. Blackwood, at Sydney 20th May; *Fisgard*, 42, Capt. Duntze, left Lima 30th Aug. for Valparaiso; *Fantome*, 16, Com. Sir F. Nicholson, 4th Nov. at Gibraltar.

Gorgon, st. v., Capt. Hotham, 24th Aug. left Buenos Ayres for England. *Iris*, Capt. Mundy, 24th July left Hong Kong for northward. *Juno*, 26, Capt. P. Blake, 11th Nov. left Spithead for the Pacific.

Kingfisher, 12, Com. C. F. Brown, 31st Oct. left Portsmouth for coast of Africa. *North Star*, 26, May 7th arr. at Auckland from Bay of Islands, 13th June arr. at Sydney from New Zealand.

Osprey, 12, Com. Patten, 25th July arr. at Singapore, 28th sailed for New Zealand. *Plover*, Capt. Collinson, C.B., left Hong Kong for Fouchow 9th July; *Pandora*, 6, Lieut. Com. Wood, 19th Aug. arr. at Rio from Plymouth, 28th sailed for Falkland Islands.

Royalist, 8, at Sydney 20th May from Calcutta; *Ringdove*, 28th Oct. arr. at Portsmouth in command of Lieut. W. Need, 10th Nov. paid off; *Racer*, 16, Com. Reed, 14th Sept. left Rio for Monte Video.

Serpent, 16, Aug. 1st arr. at Madras from Penang, 10th Aug. arr. at Singapore from Madras; *Spy*, 3, Lieut. Wooledge, 15th Aug. arr. at Rio from Plymouth, 24th sailed for Monte Video. *Thalia*, 42, Capt. Hope, 15th Nov. arr. at Spithead from South America.

Vulture, st. v., 30th Aug. left St. Helena for Cape and China; *Vixen*, Com. Giffard, 19th July arr. at Singapore; *Vanguard*, 80, Capt. Willis, 2nd Nov. left Spithead to join Experimental Squadron. *Wolfe*, 18, Com. Gordon, 2nd July left Hong Kong for Chusan.

PORTSMOUTH.—Ships in Port—*President*, at Spithead. In Harbour—*St. Vincent*, *Victory*, *Excellent*, *Victoria and Albert*, *Thalia*, *Rattler*, *Dasher*, *Comet*, and *Dee*.

PLYMOUTH.—*Penelope*, steam-frigate. In Harbour—*Caledonia*, *Endymion*, *Black Eagle*, *Confiance*, *Prince of Warsaw* (Russian). In the Sound—*Queen*, *Ingermanland* (Russian).

The *Eagle*, 50, Capt. Martin, C.B., with the flag of Rear-Adm. Inglefield, C.B.; *Melampus*, 42, Capt. Campbell; *Curacoa*, 20, Capt. Sir T. Pasley; *Philomel*, 6, surv. v., Com. Sullivan; and *Firebrand*, st. v., Capt. Hope, were left off Monte Video, Aug. 20th. *Acorn* and *Dolphin* must also have been there by that time.

The gallant Sir W. Daniell, of the *Ringdove*, died at Sierra Leone on 15th of September, from disease of the lungs, much to the regret of the officers and ship's company, whom he had commanded three years and eight months, and by whom he was greatly beloved. Sir William was a Commander of 1826, and was made Lieutenant in 1813, in which latter rank he served on board the flag-ship, the *Queen Charlotte*, at the battle of Algiers. The *Ringdove* was commissioned 26th Jan., 1842, when she proceeded to the West India station. She was, however, ordered to the coast of Africa about fifteen months since, and has been there until this time. She has been healthy, and reports favourably of the state of health of the squadron on the station; not much sickness had prevailed. The Surgeon, (Dr. Mackay,) and the Paymaster and Purser, (Mr. Drury,) are the only principal officers on board who left England in her.

Promotions and Appointments.

(From the Naval and Military Gazette.)

Downing-street, Oct. 24, 1845.—The Queen has been pleased to appoint W. Winniett, Esq., Commander in the Royal Navy, to be Lieutenant-Governor of Her Majesty's Forts and Settlements on the Gold Coast.

Promotions.

Commodore, *pro tem.*—F. Moresby, C.B., and to command the Experimental Squadron of two-deckers

Captains—C. H. M. Buckle——J. Russell.

Retired Captains—J. Banks——C. Tulloch—R. Whitwell.

Commanders—C. H. Beddoes—J. S. Ellman—L. Browell—R. S. Hewlett.

Lieutenants—A. C. Hobart—J. S. Mann—E. H. H. D'Aeth—Hon. J. R. M. Byng.

Appointments.

Captains—Sir R. Grant, Kt. (1828) to *St. Vincent*—H. B. Martin, C.B. (1828) to *Grampus*—Sir H. Leeke, K.H. (1826) to *Queen*—T. Henderson, (1840) to *Endymion*—J. N. Nott (1842) to *Trafalgar*.

Commander—T. Hope (1841) to *Bittern*—J. Fulford (1840) to *President*—F. W. Austen (1841) to *Alecto*

Lieutenants—H. G. Morris (1841), Hon. J. W. S. Spencer (1841), R. W. Twiss (1829), R. D. Fowler (1837), R. M. Robertson (1839), G. B. B. Collier (1842), W. H. Mowbray, J. Compton, to *St. Vincent*—H. M. Tylden (1836) to command *Lizard*—J. S. Douglas (1815) to command *Volcano*—W. H. Kennedy (1838), G. C. Fowler (1841), to *Queen*—T. J. Smyth (1842) to *Juno*—R. Jenner (1840), C. E. Rowley (1843), to *Excellent*—W. Horton (1842) to *Vernon*—J. B. Willoughby (1841) to *Mohawk*—B. A. Wake (1837), C. Hadaway (1828), to *Albion*—A. C. Hobart (1845) to *Rattler*

Masters—J. Dillon to *Alecto*—C. J. Hutchings to *Grampus*—J. Matthews to *Warspite*—R. Salmond to *Retribution*—J. Chegwyn to *Endymion*—T. Elson to *St. Vincent*.

Mates—J. C. W. N. Taylor to *Trafalgar*—E. E. Maunsell, E. A. Blackett, G. H. H. Greathed, C. O. H. P. St. John, and O. Borland, to *St. Vincent*—R. Purvis to *Excellent*—E. A. Drummond and W. R. G. Pullen, to *Vanguard*—R. D. Graham, J. R. Harward, and G. C. Campbell, to *President*—G. A. Brine to *Queen*—A. C. Strode to *Juno*.

Second Masters—J. C. Sullivan to *Medina*—G. Brockman to *Fearless*—E. Rowe to *Lizard*—W. Brodie, G. Allen, W. H. Mallard, H. D. Beach, and J. Scarlett, to *St. Vincent*.

Masters' Assistants—A. Webb to *Lizard*—C. P. Nicoll, J. Cutijar, and E. J. Maitland, to *St. Vincent*.

Midshipmen—F. A. Cotton to *Excellent*—J. Gursne, W. Corneck, G. B. Phillips, and R. M'Murdo, to *St. Vincent*—E. Chambers to *President*—E. W. Shaw to *Juno*—R. B. Webb to *Siren*.

Naval Cadets—J. B. Creagh, J. Le M. Thomas, Lord G. Grosvenor, H. C. Berleigh, and R. H. Rickman to *St. Vincent*—J. S. Lewin and C. Rachnid to *Agincourt*—Hon. W. Anson to *Hibernia*—J. M. Bruce to *Fantome*—T. D. Kidd and H. Baring to *Collingwood*—M. Singer and H. W. Fox to *Modeste*—R. Purvis to *Alecto*—G. J. Dall to *Vanguard*—J. Parry to *Seaflower*—W. Vicary to *Heroine*.

Surgeons—S. W. Webb to *Hydra*—J. W. Bowler to *Alarm*—C. D. Steel to *Frolic*—J. H. Patterson to *Helena*—J. F. Charlton, M.D., to *Grampus*.

Assistant-Surgeons—N. C. Hatherley to *Alarm*—C. A. Anderson, M.D., to *President*—J. Joliffe, W. H. Cameron, to *Agincourt*—P. Digan, M.D., to *Caledonia*—J. D. Cronin to *Rattler*.

Paymasters and Pursers—J. L. Southey to *Queen*—C. F. Turner to *Flying Fish*—R. H. Goddard to *Endymion*.

Naval Instructors—T. C. E. Warcup to *Retribution*—W. E. Shard to *Endymion*—T. D. Smith to *Excellent*.

Chaplains—Rev. J. Malet, to Pembroke dockyard—the Rev. E. Kitson to the Royal Hospital, Greenwich—J. Marshall to *St. Vincent*.

Clerks—E. M. Stone to *Alarm*—S. J. Spark to *Beacon*—J. Death to *Retribution*.

Assistant-Clerks—W. G. Foster to *Kingfisher*—J. T. Bignell to *Alarm*—T. W. Stoke to *Retribution*.

Coast Guard.

Appointment—Com. J. M. Mottley, to be Inspecting Commander at Hastings.

Removals—J. Mitchell to Rothwallen, Lieut. Hungerford to Strangford, F. Carey to Dunkeehan, R. Thompson to Rutland, Lieut. R. Taylor to Langstone Harbour, J. O. Freeland to Chichester Harbour, Lieut. C. W. Ross to Ballinacorty.

Births.

At Freshwater, Isle of Wight, Nov. 12, the lady of Capt. Goldie, R.N., of a son.

In Charles Place, Dartmouth, Nov. 5th, the lady of J. Coaker, Esq., R.N., of a daughter.

Deaths.

Oct. 25th, at Westbourne Place, the lady of Capt. H. J. Matson, R.N.

Sept. 28th, Capt. S. A. Ratsey, son of Rear-Admi. Ratsey, West Cowes.

Oct. 13th, at Ryde, Rose Jane, only daughter of Lieut. Helby, R.N.

METEOROLOGICAL REGISTER.

Kept at Croom's Hill, Greenwich, by Mr. W. Rogerson, of the Royal Observatory.

From the 21st of October, to the 20th of November, 1845.

Month Day.	Week Day.	Barometer.		Fahrenheit Thermometer, In the Shade.				Wind.				Weather.	
								Quarter.		Strength			
		9 A.M.	3 P.M.	9AM	3PM.	Min	Max	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.
		In Dec.	In Dec.	o	o	o	o						
21	Tu.	30·28	30·30	44	52	39	53	NW	NW	5	4	qbcm	bcm
22	W.	30·38	30·40	44	52	39	53	W	W	2	2	bcm	o
23	Th.	30·53	30·49	47	51	46	52	W	SW	2	2	bcm	b
24	F.	30·40	30·26	42	50	34	52	SE	SE	1	1	bc	bc
25	S.	30·20	30·25	41	51	36	52	SW	N	1	4	bcmf	bcm
26	Su.	30·33	30·29	37	45	34	46	W	SW	1	1	of	bc
27	M.	30·11	30·09	46	50	37	52	W	W	2	4	o	o
28	Tu.	30·06	30·06	50	55	43	57	SW	SW	2	2	bc	bc
29	W.	30·02	29·96	50	53	48	54	S	S	3	3	b	b
30	Th.	29·90	29·98	48	57	43	58	SW	SW	1	1	bc	bc
31	F.	30·13	30·15	51	53	49	55	N	N	2	2	o	bc
1	S.	30·16	30·13	44	52	39	52	NE	NE	2	2	b	b
2	Su.	30·22	30·26	42	52	38	52	NE	NE	1	1	bc	o
3	M.	30·28	30·28	33	46	33	47	E	NE	1	1	b	b
4	Tu.	30·24	30·14	32	45	27	46	E	SE	1	2	bf	b
5	W.	29·85	29·79	34	52	30	54	SE	S	2	2	b	bcp (4)
6	Th.	29·68	29·56	51	57	47	58	SE	S	2	3	bc	bcr (4)
7	F.	29·56	29·54	50	53	48	54	S	S	4	5	bc	qo
8	S.	29·48	29·48	53	56	51	57	SE	S	1	1	op (2	bc
9	Su.	29·54	29·52	49	56	44	57	SE	S	1	1	bc	bc
10	M.	29·44	29·38	47	51	45	52	SE	SW	2	2	bc	bcp (3
11	T.	29·28	29·16	43	47	39	48	NW	SW	4	3	od 2)	od (3)
12	W.	29·46	29·52	45	48	43	49	SW	W	2	2	bc	bc
13	Th.	29·78	29·79	38	46	34	48	N	NW	3	3	of	bcm
14	F.	30·04	30·02	43	44	40	45	W	NE	1	1	ogm	bcf
15	S.	29·90	29·84	43	47	35	48	SE	S	1	2	od 2)	bc
16	Su.	29·64	29·42	50	50	45	51	S	S	3	6	bc	qod (3)
17	M.	29·38	29·48	42	48	40	50	W	W	4	4	bc	bc
18	Tu.	29·22	29·29	54	53	41	55	SW	SW	6	5	qbc	qbc
19	W.	29·10	29·10	55	53	43	55	SW	SW	7	5	qor (2)	qbcp (3)
20	Th.	29·14	29·16	48	48	46	50	SW	SW	4	5	b	qocp (3)

October 1845.—Mean height of the Barometer—29·987 inches; Mean temperature—49·7 degrees; depth of rain fallen 1·35 inches.

TO OUR FRIENDS AND CORRESPONDENTS.

A Subscriber to the valuable "Nautical Blue Book" has our best thanks for his remembrance of us. He will find the letter in the early part of this volume.

The "Diarist" shall be heard in his turn, but our present space is not sufficient to admit him.

The biographical notice of the late "Admiral Raper" reached us too late for insertion in our present number. It shall appear in our next.

Lieut. Heath's paper in our next.

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ERRATTA.

Page 32, line 23 *for* "inlaid" *read* "inland"
308, line 15 *for* "218" *read* "218"
472, line 24 *for* "ship's" *read* "ships".
694, line 30 *for* "depatched" *read* "launched".
720, line 3 from foot, *for* "walks" *read* "tracks".

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